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April 1914

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SURGEON-GENERAL'S OFFICE

VOLUME XII.



NUMBER 1

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The New Mexico Medical Iournal

Volume XII APRIL, 1914 No. 1

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ADVERTISING BY PHYCICIANS

Following the midwinter Conference on Public Health, Legislation and Medical Education of the American Medical Association, held in Chicago, February 23 and 24, numerous news-items and editorial comments appeared in the public press regarding one of the papers presented at the Conference. The substance of the newspaper items was that the American Medical Association was considering the revision of its principles of ethics with a view to removing or modifying the restrictions placed on individual physicians as to personal advertising. Some of the reports stated that revision of the principles of ethics would be taken up at once, and that an overwhelming majority of members of the Association were in favor of such a change. So far as we know, says The Journal of the American Medical Association, there is no intention or indication of any change in the position of the American Medical Association on this question; the reports in the newspapers were due to a misapprehension of the character of the paper in question and the intent of the writer.

The paper was an argument for a better understanding and closer cooperation between the medical profession as an organization and the newspaper publishers as a class. The author did not advocate or discuss the question of personal advertising on the part physicians; the proposition set forth and defended in the paper and presented to the Conference was something entirely different from personal exploitation; it was a plea for closer cooperation between medical organizations and the press for the public good, and not for personal benefit. It suggested that the expert knowledge of the medical profession could be utilized by the public press in two ways: first by the dissemination through the newspapers of scientific knowledge which would be of value to the public in preventing disease, and second, in placing at the disposal of those newspapers. which desired it the expert knowledge of the medical profession in separating worthy and reputable from dishonest and disreputable institutions which might seek publicity through the newspapers.

Of these two important activities one has already been inaugurated by the American Medical Association, and the other is worthy of serious consideration. Neither of them, however, has the slightest bearing on the question of personal exploitation of physicians through newspaper advertising or by any other means. An honorable physician could not conscientiously advertise for personal business, for the same reason that the honorable minister and lawyer would not advertise. A professional man has no commodity to sell; his only assets are his scientific knowledge and his personal ability; and he who claims to possess greater knowledge or greater skill than his professional associates — whether physicians, preachers or lawyers—is an egotist, or worse, and forfeits the respect of both his professional brethren and his fellow citizens.

AN EXPERIMENT WITH TUBERCULOSIS

The problems presented by the widespread existence of tuberculosis in dairy cattle are manifold. They bear on human experience in connection with the hygiene of the milk-supply, which is assuredly a matter of no small concern to all classes of society. The question of tuberculosis in cattle involves the economics of agriculture to a far greater degree than the uninitiated can appreciate; for the disease has manifested it self so widely that the hope of complete eradication must be deferred for a long time to say the least. Furthermore the outcome of the management of tuberculous herds may point the way for advantageous application in the field of human treatment or prevention.

In view of the enormous practical difficulties in the way of the complete eradication of tuberculosis in cattle by the wholesale slaughter of all animals known to be infected with tuberculosis, schemes for utilizing the latter have been devised. The most prominent of

these is the system whereby tuberculous cows are isolated and used for breeding purposes, the calves being removed from the mothers at the earliest moment and brought up without further exposure to the disease. This has been rendered possible by the finding that such young are regularly born in perfect health, and entirely free from tuberculosis. The affected breeding cattle in this way do not become an entire economic loss. A ten-year investigation, carefully verified and supervised by government officials, has just been reported by Brooks in connection with what is probably one of the most valuable herds of Holstein-Friesian cattle in the world

The object was to produce a herd of Holstein cattle free from tuberculous taint and yet endowed with all the most valuable strain-characteristics possessed by this breed. Animals were selected because of their desirability, entirely independent of the presence or absence of tuberculosis. The tuberculous animals greatly out-numbered the non-tuberculous. Three hundred tuberculous animals were studied. The existence of tuberculosis was determined by the administration of treble the official dose of tuberculin, repeated in non-reacting animals three times at intervals of six months. All animals reacting to either test were removed at once to the tuberculous farm so that there was no possibility of the transmission of infection from the tuberculous group to the healthy one. At birth the calves are immediately taken from the mother. Feedings are on pasteurized milk collected indiscriminately from sound and tuberculous animals.

Of more than two hundred calves born of the tuberculous herd, not one

has become tuberculous, although all have been tested three times by massive doses of tuberculin. These animals are rather more resistant to tuberculosis than animals born of non-tuberculous parents. No falling off in type, in milk production or fertility is present in these calves, no increase in death-rate exists among them as compared with the offspring of healthy cattle, no falling off in value takes place, and several of the most valuable cows and bulls in the world are of this ancestry. These facts, says The Journal of the American Medical Association, remain constant even where at least three generations of known tuberculous parentage exist.

THE CAUSE OF EPIDEMIC SEP-TIC SORE THROAT

Three extensive outbreaks of septic sore throat in the past three years, in Boston, Chicago and Baltimore, have directed attention to the disease. The facts in regard to these and similar epidemics have been reported from time to time in *The Journal of the American Medical Association*. The relationship of the disease to the milk-supply has for some time been either supected or confirmed. There has been a tendency, in the investigation of a number of epidemics, to conclude that the source of the infection is the inflamed udder of the dairy cow.

The evidence for the forgoing theory of infection has hitherto been circumstantial rather than positive and direct. The outbreak of epidemic septic sore throat at Cortland and Homer in the state of New York, during April of last year, gave an opportunity to demonstrate the correctness of the commonly held view. This outbreak cast

suspicion on the milk-supply from one dairy. Over 70 per cent: of the cases in each community occurred among the patrons of a dairyman who was the only dealer selling milk in both places, and who furnished less than 7 per cent. of the total milk-supply. Adjacent towns had no cases, and, further, they received no milk from the suspected dairy. As the result of an inspection of the cattle belonging to this dairy, two cows showing physical signs of udder inflammation were isolated from the main herd and the use of their milk was forbidden. For the first time in the history of the investigation of individual cows for the existence of udder inflammation, a centrifugal milk-clarifier was used. By means of this apparatus the milk of all animals in the herd involved was examined and the sediment easily secured. The results in the case of the two supected animals alone furnished sufficient evidence, by contrast with the milk sediment of the rest of the herd, to point conclusively to their udders as affected; and the microscopic examinations showing the pus germs discharged by the inflamed udder into the milk completed the proof.

Bacteriologic examination demonstrated that cultures from the throats of four patients contained streptococci identical with streptococci obtained from milk slime from two cows suffering from garget. As it is now generally held that streptococcus is the cause of septic sore throat, the predominance in the inflamed udders of garget cows of organisms of that type has drawn attention to their possible significance, and has suggested the probable original source of the infection in man. We must not forget the possibility, how-

ever says The Journal of the American Medical Association, that in addition to the primary infection of milk, infection may be accidentally introduced into it through its being handled by persons suffering from infection.

MOVING PICTURES.

On another page we present an article on the subject of moving pictures, written expressly for this Journal by doctor Elliott C. Prentiss of El Paso, Texas. Apropos of this article and for the thought it contains we call attention to the following, taken from a recent issue of the El Paso, Texas, Herald:

"Moving Pictures Drive Youth to Take Own Life.

"London, England, March 28.—Influenced by viewing moving pictures and reading cheap novels, Thomas Leslie Mellor, a 12 year old youth of Darlington, committed suicide in a picturesque manner, by blindfolding himself with a handkerchief and walking in front of an express train at Durham. His father said that the lad had been morbid for some time and attributed his state of mind to the thrilling moving pictures of which the boy was very fond.

The Index Office which has recently been established in Chicago intends to make a specialty of serving the medical profession by undertaking to supply exhaustive or selected bibliographies of medical subjects, translations or abstracts of articles or monographs, copies, photographic or otherwise, of manuscript, printed or illustrative material.

Special attention will be paid to discretional research and investigations in the libraries of Chicago and other cities.

The Office also intends to bring investigators in touch with the work of others in the same line of research.

Located in the city of great libraries, the Office will be in position to undertake quite extensive investigations without going outside the locality of its headquarters. It is the intention of the Board of Trustees, however, to establish connections in the other great library centers of the world.

Dr. Bayard Holmes, surgeon and medical writer, is President of the Office, Aksel G. S. Josephson, Cataloguer of the John Crerar Library, is Secretary and directing officer. The Office is located at 31 West Lake Street, Chicago.

At the last meeting of the State Board of Health and Medical Examiners the following licenses were granted upon diploma:

Alden D. Cattersen, Med.-Chirur-

gical, Philadelphia, 1889.

Luis de la Garza-Cardenas, Nat'l School of Med., Mexico, 1885.

Tannus F. Tannus, Phys. & Surgeons, Chicago, 1905.

Axel Aberg, Denver & Gross, 1905. Ernest F. Brewer, Phys. & Surgeons, Chicago, 1906.

David C. Twichell, Columbia, 1903. Paul E. McChesney, Columbia, 1911: Clarence G. Stigall, Univ. Louisville, 1907.

Augustus T. Clarke, Harvard Med., 1870.

Lee S. Huizenga, N. Y. Homeopathic & Flower Hosp., 1913.

The following were licensed by reciprocity with Oklahoma:

Philip F. Herod, Univ. Med. Coll., Kansas City, 1908.

Reuben E. Sawyer, Eclectic Med., Cincinnati, O., 1905.

Melvin Gray, Eclectic Med., Kansas City, 1900.

The following were licensed by examination:

Eugene Hall, Ft. Worth Univ., 1910.

Emanuel O. Stuckey, Univ. Nashville, 1903.

Two were examined, but failing to obtain the required percentage were instructed to appear at the next Board meeting to again take the examination.

N. E. KASER, Secretary.

MEMBERSHIP ROLL.

Below we give the membership of the New Mexico Medical Society as it appears by the books of the secretary at the time of going to press.

This report includes all of the county societies whose reports are in the hands of the secretary as well as the names of the members who are not affiliated with any county society and who have paid their 1914 dues.

The name of a member not appearing on this list is prima facie evidence that he has not paid his dues for 1914 or that the secretary of his county society has not yet reported him in good standing.

BERNALILLO COUNTY MEDICAL SOCIETY.

President, J. A. Reidy.

Vice-Presidents. Eveyln F. Frisbie and J. W. Colbert.

Secretary, Frank E. Tull. Treasurer, A. G. Shortle.

Delegates, J. F. Lilly,* W. G. Salmon, C. A. Frank, E. Osuna, J. H. Wroth.

Censors, J. H. Wroth, W. G. Hope, W. W. Spargo.

Members:

F. C. Bakes, Albuquerque;

C. Leroy Brock, Jemez;

D. H. Carnes, Albuquerque;

M. G. Cartwright, Guanajuato, Mexico.

P. G. Cornish, Albuquerque;

Jos. C. Cipes, Albuquerque;

Lewis C. Day, Albuquerque;

J. S. Easterday, Albuquerque.

J. W. Elder, Albuquerque.

T. Espinosa, Albuquerque;

C. A. Frank, Albuquerque.

E. F. Frisbie, Albuquerque;

F. F. Fadeley, Albuquerque.

G. H. Fitzgerald, Chivatera, Sonora, Mexico;

Jno. R. Haynes, Park View;

W. G. Hope, Albuquerque;

R. L. Hust, Albuquerque;

H. B. Kauffmann, Albuquerque;

Geo. O. Keck, Albuquerque;

C. E. Lukins, Albuquerque;

W. R. Lockett, Carthage.

W. R. Lovelace, Albuquerque.

G. S. McLandress, Albuquerque.

W. T. Murphy, Albuquerque;

E. Osuna, Albuquerque;

J. F. Pearce, Albuquerque;

J. F. Patchin, Albuquerque;

L. S. Peters, Albuquerque;

J. A. Reidy, Albuquerque;

L. G. Rice, Albuquerque;

A. G. Shortle, Albuquerque; W. W. Spargo, Albuquerque;

W. M. Sheridan, Albuquerque;

W. T. Salmon, Albuquerque;

Frank E. Tull, Albuquerque;

A. M. Wigglesworth, Albuquerque;

J. H. Wroth, Albuquerque;

M. K. Wylder, Albuquerque;

M. M. McCreary, Magdalena;

Jno. E. Hastings, Bernalillo;

S. L. Burton, Albuquerque; J. W. Colbert, Albuquerque; *Deceased.

CHAVEZ COUNTY MEDICAL SOCIETY.
President, H. A. Ingalls.
Vice President, W. C. Buchly.
Secretary-Treasurer, C. M. Yater.
Delegates, C. F. Beeson and W. T.
Joyner.

Board of Censors, C. M. Mayes, J.

W. Kinsinger, R. L. Bradley.

Members:

Fay. A. Allen, Roswell;

C. F. Beeson, Roswell;

R. L. Bradley, Roswell;

W. C. Buchly, Roswell;

H. V. Fall, Roswell;

E. M. Fisher, Roswell;

H. A. Ingalls, Roswell;

W. T. Joyner, Roswell;

J. W. Kinsinger, Roswell;

J. W. Laws, Lincoln;

C. M. Mayes, Roswell;

C. F. Montgomery, Roswell;

L. H. Pate, Lake Arthur;

T. E. Pressley, Roswell;

C. M. Yater, Roswell A. J. Evans, Elida.

DONA ANA COUNTY MEDICAL SOCIETY.
President, Charles Turner Sands.
Vice-President, A. E. Lauson.
Secretary-Treasurer, Troy C. Sex-

Delegate, Troy C. Sexton. Censors, J. H. Johnson, H. M. Cornell, B. E. Lane.

Members:

B. E. Lane, Las Cruces;

C. T. Sands, Las Cruces;

T. C. Sexton, Las Cruces;

Nathan Boyd, Las Cruces; H. M. Cornell, Las Cruces;

R. E. McBride, Las Cruces;

H. C. Blair, Rincon; A. E. Lauson, Anthony; J. H. Johnson, Organ.

LAS VEGAS MEDICAL SOCIETY.

(San Miguel County.)

President, W. E. Kaser.

Vice-President, Wm. Howe.

Secretary-Treas., F. H. Crail.

Delegates, F. H. Crail, M. F. Des-Marais.

Censors, W. R. Tipton, E. B. Shaw, C. S. Losey.

Members:

W. R. Tipton, East Las Vegas; Edwin B. Shaw, East Las Vegas;

H. M. Smith, East Las Vegas;

A. E. Northwood, Wagon Mound;

H. J. Mueller, East Las Vegas;

Wm. P. Mills, East Las Vegas;

F. T. B. Fest, Costa Rica;

W. E. Kaser, East Las Vegas;

M. F. DesMarais; Las Vegas; R. K. McClanahan, East Las Vegas;

C. S. Losey, East Las Vegas;

F. H. Crail, East Las Vegas;

Jno. G. Martin, Anton Chico;

Wm. Howe, East Las Vegas;

H. A. Miller, Las Vegas;

Doctor Gobbel, Albuquerque.

LUNA COUNTY MEDICAL SOCIETY.
President, F. D. Vickers.
Vice-President, E. A. Montenyohl.
Secretary, J. O. Hatcher.
Treasurer, P. M. Steed.
Delegate, F. D. Vickers.
Censors, P. M. Steed, J. G. Moir,
M. M. Crocker.

Members:

J. G. Moir, Deming;

S. D. Swope, Deming;

P. M. Steed, Deming;

E. A. Montenyohl, Deming;

R. C. Hoffman, Deming;

E. M. Paine, Deming;

F. D. Vickers, Deming;

R. S. Spears, Deming;

J. O. Hatcher, Deming;

J. B. Barbee, Deming;

Janet F. Reid, Deming;

M. M. Crocker, Lordsburg.

SANTA FE COUNTY MEDICAL SOCIETY.
President, F. E. Mera.

Vice-President, J. M. Diaz.

Secretary-Treasurer, W. H. Lloyd Members:

F. E. Mera, Santa Fe;

J. M. Diaz, Santa Fe;

W. H. Lloyd, Santa Fe;

J. A. Massie, Santa Fe;

J. A. Rolls, Santa Fe;

S. G. Small, Santa Fe;

W. S. Harroun, Santa Fe;

David Knapp, Santa Fe;

C. C. Gunter, Santa Fe;

T. F. Tannus, Santa Fe;

W. H. Livingston, Espanola;

E. G. Weideranders, Estancia;

Dora F. Weideranders, Estancia:

E. F. Brewer, Santa Fe;

W. L. Brown, Espanola;

G. N. Luckey, El Rito.

QUAY COUNTY MEDICAL SOCIETY.

No report as to officers.

Members:

O. E. Brown, Tucumcari;

B. F. Herring, Tucumcari;

F. W. Noble, Tucumcari; J. E. Manney, Tucumcari;

A. M. Chambers, Tucumcari;

A. D. Catterson, Tucumcari.

J. C. Woodburn, Cuervo;

M. M. Thompson, Logan.

OTERO COUNTY.

President, J. R. Gilbert.

Vice-President J. R. Callaway.

Secretary-Treas., J. G. Holmes.

Censor, E. D. McKinkley.

Delegate, C. A. Miller.

Members:

J. R. Gilbert, Alamogordo;

J. G. Holmes, Alamogordo;

E. D. McKinley, Alamogordo;

J. R. Howell, Tularosa;

J. R. Calloway, Mescalero;

L. K. Warren, Cloudcroft;

S. E. McDaniel, Tularosa.

C. A. Miller, Tularosa.

GRANT COUNTY MEDICAL SOCIETY.

President, William MacLake.

Vice-President, E. S. Bullock.

Secretary-Treasurer, I. D. Loewy.

Delegates, O. T. Hyde, E. S. Bruns,

G. K. Angle, Alternate.

Censors, F. P. Whitehill, G. K. Angle.

Members:

William MacLake, Silver City.

E. S. Bullock, Silver City.

I. D. Loewy, Silver City.

F. P. Whitehill, Silver City.

J. O. Walkup, Fort Bayard.

O. T. Hyde, Silver City.

E. H. Bruns, Fort Bayard.

T. P. Williams, Fierro.

G. E. Bushnell, Fort Bayard.

R. C. Loving, Fort Bayard.

S. W. Marietta, Fort Bayard.

L. R. Poust, Fort Bayard.

C. J. Logan, Silver City.

Doctor Scott, Fort Bayard.

D. Twitchell, Silver City.

S. J. Hanks, Hurley.

G. K. Angle, Silver City.

Members not members of a county society:

J. M. Shields, Jemez Springs;

C. G. Duncan, Socorro;

F. A. Dillon, Laguna;

A. E. Bessette, San Marcial; W. T. Brown, Wattrous; W. F. Wittwer, Los Lunas; T. W. Watson, Lincoln; A. F. Brown, Fort Sumner. Harry D. Sewell, Chama.

County Society Motes

BERNALILLO COUNTY SOCIETY NOTES

At the regular meeting of March 4th, the members of the Bernalillo Bar Association met in joint session with the Medical Society to listen to a paper by Dr. J. H. Wroth on Bismuth Poisoning as illustrated by the Major poisoning case at Alamogordo. Dr. Wroth presented the medical side of the question and read the chemist's report. The discussion following brought out many interesting points both from a medical and legal standpoint.

At the regular meeting of March. 18th. Dr. A. G. Shortle read a paper on Unresolved Pneumonia and Dr. L. C. Day of the local Indian School presented an interesting report on an epidemic of Typhus Fever which has been prevalent among the indians near here.

March 30th, Dr. Woods Hutchinson of New York City gave a lecture at the Elk's opera house on Foods and Foolishness. Contrary to most medical lectures, the house was packed. His ideas on diet were sane and for over an hour he held the interest of everyone, talking in an easy and interesting manner. He arrived on the limited and was the guest of the Albuquerque Sanatorium for lunch, after which he spoke to the High School, and in the evening was given a dinner at the Al-

varado by the Bernalillo County Medical Society.

The Thespian Society, members of which are actors, has purchased a tract of fifty acres on the mesa and will begin at once the erection of a sanatorium for the consumptive members of their order.

L. S. P.

Original Articles

A STUDY OF THE THYROID GLAND.

S. D. SWOPE, M. D., Deming, N. M.

(Read before the 32nd Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., October 2nd-4th, 1913.)

The thyroid gland, which for so many years has eluded the sleuths of surgical science, seems about to be taken into the fold.

In May, 1907, Charles H. Mayo reported 475 operations upon the thyroid in a period of approximately twenty years. In June, 1913, he reported five thousand operations on the thyroid in twenty-five years, an average of nearly three a day for the working days of the last six years. At the same time, June, 1913, Crile reported eight hundred operations on the thyroid. Judging from the number of operations on the thyroid as enumerated above and taking into consideration the fact that many other operators are performing operations upon the thyroid gland, the work in this, but recently prohibitive field of surgery, is making wonderful progress.

The study of the thyroid and its pathological phenomena by Louis B. Wilson and William C. McCarty of Rochester, Minnesota, has certainly thrown much light upon the subject. With the wonderful amount and variety of clinical material at their disposal "the daily examination and study of Goiter" bids fair to produce some satisfactory results.

The thyroid gland develops very early in the embryo from one bud. The lower poles are formed from this bud in the fourth brachial groove. The bud is of hypoblastic origin. About the seventh week these poles of development are united to form the isthmus and two lateral halves of the horseshoe shaped gland, that rests upon the front and sides of the trachea, a little above the upper surface of the manubrium. The diseases of the thyroid are divided by C. H. Mayo into Functional derangements, Inflammations, Hypertrophies, and Tumors.

Tinker of Cornell, in American Journal Medical Science 1907, states, "Enlargement of the thyroid may result from inflammation, hypertrophy, and tumors."

The functional derangement may be divided into deficient action, hypothyreosis, and over activity hyperthyreosis.

Inflammations of the thyroid are divided into acute and chronic of the normal thyroid, and strumatis or inflammations of the abnormal thyroid or goiters (Keen).

In hypertrophy of the thyroid the alveola are enlarged and there is an excess of colloid material; an excess of secretion and production of colloid material without an equal amount of absorption (MacCarty).

Tumors of the thyroid may be benign or malignant. Benign tumors of the thyroid apparently constitute the majority of goiters. Colloid cysts, simple or multiple, are most frequently found. Hematomata, adenomata and fribromata are found. Malignant tumors of the thyroid are more rare and consist in sarcomatous and carcinomatous growth of various histological development.

Accessory thyroids have been discovered, both ante- and postmortem; they have been described by many anatomists and surgeons. von Haller, in 1779, described an accessory thyroid at the middle of the thyroid cartilage, separate from the thyroid proper. In an excellent paper, Murphy of Chicago, in the Journal of the A. M. A., 1905, gives some interesting and instructive information on accessory thy-The effects of the growths should be eliminated in consideration of obscure cases when symptoms characteristic of thyroid derangement are not easily accounted for.

MacCarty, Mayo clinics, gives some valuable information on the subject of thyroids. The amount of material at hand and the thoroughness of the work in the Mayo laboratories, make the conclusions of this pathologist of great importance. He says the fetal thyroid contains no histologic visible secretion and yet it is the forerunner of a fetal adenoma.

The normal thyroid is composed of alveoli lined with one layer of epithelium. It secretes some substance and contains the partially non-absorbed colloid, some of which remains in the alveoli.

In simple or cystic goiter, the alveoli are large and filled with colloid, an excess of secretion without an equal amount of absorption. In ex-opthalmic goiter, there is an excess of secretion and an increased absorption, with slight if any increase in colloid production. There is still another stage where symptoms are very excessive, in which histologically, an extreme cytolysis is seen. We have an extreme excess of the products of the degenerating cells with increased absorption, Another stage may be termed the cured stage, which has withstood the overgrowth, an excess of secretion and cytolysis, until there remains a large tumor, composed of alveoli lined with thin connective tissue, or atrophic cells instead of healthy epithelium and filled with colloid material. Their only inconvenience is the tumor without toxic effect. Some of these develop into myxoderma.

The following is MacCarty's summary:

The process of goiter may be a process regression of the thyroid gland to some former function.

Hyperthyroidism is a toxemia, the result of the absorption of the hyperactive thyroid.

The stimulus causing the hyperactivity may be the same that stimulated the thyroid to activity in primitive man.

The types of goiter are probably not types but stages in a general process.

Goiters may be classified upon a pathologic basis as, (A) cystic goiter, (B) hypertrophic parenchymatous goiter, (C) papillary cystic goiter, (D) hypertrophic fetal thyroid and (E) fetal adenoma of the thyroid. Hyperthyroidism always occurs in B and C and may occur in E.

Investigators have about agreed that the cause of goiter is found in some material absorbed from drinking water. In a report on causes and cure of goiter by the French government, quoted in the American Journal of Medical Sciences in 1851, 450,000 persons in France were found suffering with goiter. The commission after careful investigation reported that the existence of goiter bears no relation whatever to latitude, climate, elevation of residence, poverty or other depressing causes. A study of the fluids employed as drink, led to the conclusion that goiter depends on the presence of magnesia in the food or drink, joined with absence of sufficient quantity of iodine to serve as an antidote. They found that where rain water was used exclusively for drink, that not only was goiter relieved, but that there was a noticeable decrease in the development of the disease.

Some recent investigations in Wisconsin, Minnesota and Iowa, where goiter is prevalent, have shown that water from goiter districts would produce goiter in animals to which it was fed, even after the water had been transported to a great distance to nongoiterous districts. This water always lost its infectious character when boiled.

Rydigier ligated the thyroid and thyroid arteries in twenty-one cases of goiter in 1887-1888. His reports of these cases were published in 1890.

In 1891 Reverdin made this statement: "It must not be forgotten, despite the amelioration of statistics, that Thyroidectomy is an operation that often leaves a cadaver in the hands of an operator."

Kocher, of Berne, Switzerland, is the real father of surgery of the thyroid. In 1898 he formulated rules for operations on the thyroid. In 1901 he reported 1000 operations on the thyroid and in 1902, he reported 2160 thyroidectomies.

Since the operation of thyroidectomy is no longer an especially dangerous operation, the extirpation of goiter is justifiable and indicated in all cases where marked hypertrophic changes have taken place, where systemic disturbance has begun or where local mechanical inconvenience has developed. The possibility of malignant development justifies the recommendation of extirpation in all goiters that are not undergoing normal atrophic changes and possibly even here the gland should be removed, for a possible reversion to hypertrophic development may occur at any time. The use of iodine, iodides, and the various serums, are of doubtful efficiency.

In cases of hyperthyroidism ligation of the thyroid arteries is indicated, with intention of future extirpation of the gland when conditions are more favorable. In the removal of diseased thyroid tissue careful regard should be had for the para-thyroid bodies and in no instance should healthy thyroid tissue be removed. In cases where moderate hypertrophic changes have taken place in both cornua and isthmus, the isthmus and one horn, the most diseased, should be removed. If the remaining horn does not undergo atrophic changes a further operation will be indicated.

Where the isthmus is involved alone, with both cornua normal, as occurred in a case of my own, the removal of

the diseased isthmus is sufficient to insure relief of the symptoms.

DUODENAL ULCERS.

By A. W. Morton, M. D., San Francisco, California.

(Read by title before the 32nd Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., October 2nd-4th, 1913.)

In taking up duodenal ulcers, it would be impossible not to mention the gastric ulcers, as the stomach, including the duodenum above the common duct, is similar in function coming from the primitive gut,—both functions being mechanical and chemical.

The mechanical being the most important, if interfered with, as obstructed symptoms are severe. The chemical not so severe as its juices can be artificially supplied. In ulcer there is generally hyper-secretion; on account of ulceration there is often interference with both chemical and mechanical. Mechanical by producing a spasmotic closure of the duodenum and pylorus for hours at a time, in its effort to prevent any food passing over the ulcer, causing the distended or bloated feeling the patient complains of after eating. Later as a result of contraction of the ulcer, there may be permanent obstruction by the formation of scar tissue and adhesions.

Chronic duodenal ulcers generally occur in the first two inches, and most all are single except you may find a contact ulcer. They are generally in size from a pea to a thumb nail, but usually the size of a pea, being much smaller than supposed, before taking with the X-ray and bismuth test, the

If a patient should be fortunate to survive after a perforation it would permit a permanent cure. Therefore, I shall deal only with the surgical treatment.

The cause of the chronic indurated duodenal ulcer is not well established. There may be ulcers caused by extensive burns of the surface of the body, embolic or thrombotic, due to distal infections, syphilis, tuberculosis some of the acute febrile diseases which are seldom surgical. Duodenal ulcers are more frequent in the male and at any period of life. Females are more prone to gastric ulcers, being very frequent in girls at puberty, and especially in the anemic they are prone to recur and give trouble about middle Mayo's statistics of 1000 cases give 741/2% in males, 251/2% in fe-

seemingly increased size on palpation being due to scar tissue and inflammation.

Ulcers of the duodenum generally occur from 30 to 50 years of age, but usually have an earlier history in young adult gastric trouble. We often find these cases with a family tendency. I have noticed that a large percentage of duodenal ulcers have been in men about middle life, who are excessive users of tobacco, liquor or condiments, especially heavy in tobacco.

Of course, all chronic ulcers that come to the surgeon have been to the internist, who has exhausted the storehouse of palliative treatment, which is only passive as it is impossible for the edges of these ulcers to heal permanently, unless it perforates or are sutured together.

Duodenal ulcers have about the same amount of nausea as gastric ulcers but

not so much vomiting and seldom any blood in the vomit, as it passes in the form of occult blood in stools. Hyperchloridia or heart burn is a very common symptom. Pain in duodenal ulcers from 1/2 to 1 hour after meals. Gnawing pain when the stomach is empty, then by taking a small amount of food will give food ease. The night pain is of a boring nature and occurs in the stomach in the early hours of the morning, about 1 or 2 o'clock. It is substernal and radiates to the back, Boas's point. There is tenderness anterior about one inch to the right of the median line and 2 inches below the zyphoid notch, associated with slight muscular rigidity over the right upper

The symptoms of gastric ulcers are very similar to duodenal ulcers except the pain after eating comes earlier, is more substernal, and is reflected a little higher posteriorly than in the duodenal.

The stomach findings of stomach and duodenal ulcers are so similar that we will classify them together. There is a high percentage of free hydrochloric acid and an excess of combined acids, with an excessive total acidity, etc. The stomach findings would be different if the base of the stomach ulcer was becoming carcinomatous, which rarely takes place on a duodenal ulcer but is a common sequence on a gastric ulcer. The hemorrhage with duodenal ulcer is frequent and often alarming and is recognized by severe symptoms of collapse, with all of the other symptoms of hemorrhage depending upon the amount. You will always find blood in the stool later as it takes a few hours for the blood to pass through the In gastric hemorrhage, the bowels.

symptoms are the same except they vomit most of the blood. Where the hemorrhage continues over a long period of time, the patient becomes anaemic and emaciated.

If the ulcer has a tendency to perforate, which they all have sooner or later, there is an excruciating pain over the epigastric region, lasting hours or days, and often described by the patient as a feeling of something that would burst, and when it perforates, they will tell you that it has burst and they feel the burning contents passing through the abdomen—providing you have not masked the symptoms with opium. When perforation does occur. you will have all the symptoms of profound collapse, with facial expression of terror. This condition is caused by the emptying of the contents of the duodenum or of the stomach which are almost sterile but so highly acid that it sets up toxic peritonitis which erodes the peritoneum and allows the invasion of any bacteria which might be pres-

The treatment of all chronic duodenal and stomach ulcers should be operative and immediate if bordering on, or already perforated. Under the expectant or starvation treatment, there is much emaciation and indigestion, and if the ulcer yields, it does so only temporarily by a plate of scar tissue with adhesion which has diminished resistance and will soon open again. Outside of surgery, the only way that a complete recovery may take place is by perforation, and then life can only be saved when the adhesions wall off the contents which prevent the escaping into the peritoneal cavity of the contents of the bowels and permits the edges of the ulcer to unite permanently. This would seldom happen in all your practice and you constantly meet fatalities in neglected cases. You always have the horror hanging over you of hemorrhage and perforation as well as of cancer in stomach cases. When duodenal ulcers perforate, the contents gravitate downward often misleading to the diagnosis of appendicitis.

I first make an incision about 3½ inches long and 1 inch to the right of the median line just below the zyphoid notch, on the right side so that the incision can be extended downward if necessary. The ulcer is located and made as accessible as possible. The edges of the ulcer are brought together by a continuous Lambert suture of linen and the space covered by omental tissue. Then the operation is completed by a posterior gastro-enterostomy so as to divert the contents of the stomach until the ulcer heals.

A mistake often made by many of us when we know we have an ulcer by proper diagnosis, is when we pick up the stomach we see a small anemic spot which is so easy to mistake for the ulcer. The only way to distinguish the anemic spot from the ulcer is to watch for a time to see if it returns to normal color or palpate its indurated base. I have found good results in not attempting to remove duodenal ulcers for they are not as prone to become malignant as are the gastric, and the operation described is much more simple, just as effective, and with a lower mortality than when removed. The opening in a gastroenterostomy always closes unless the ulcerous part is resected, which you might do in a contact ulcer where it has involved the greater part of both walls, and whose cicatrical tissue would produce obstruction.

Where you find a perforation it is best to operate as soon as possible, as they seldom recover after 12 hours have elapsed. Under this condition. I would close up the perforation and cover with omentum, and not do a gastro-enterostomy at this time, as it is difficult for the patient to stand the increased shock. The drainage should be made from the point of perforation and the kidney space on the right side. and should there be much adhesion. thorough drainage should be made through a super-pubic opening, after the abdomen has been cleansed with salt solution. The patient should be placed in a sitting posture and should be nourished by entero-clysis and hyperdermo-clysis. If there is any vomiting, lavage should be used, otherwise nothing but water should be placed in the stomach for several days.

The surgical treatment of chronic duodenal ulcers has long been condemned by the internists and they have very good reasons for it, not that surgical treatment in proper diagnosed cases is wrong, but they take their argument from cases of stomach trouble so often diagnosed as chronic ulcers and which, when opened up, are found to be acute dilitation of the stomach, gastric neurosis, etc., and the patient is only injured by the operative procedure. These are the cases being reported as so well handled and cured without surgery.

SEXUAL HYGIENE.

Margaret G. Cartright, M. D. Albuquerque, N. M.

(Read before the 32nd Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., October 2nd-4th, 1913.)

A man's sexual nature, like all else that is most essential in him, is rooted in a soil that was formed long before his birth.

A man's destiny stands not in the future, but in the past. That fact rightly considered is the most vital of all vital points.

It is the most serious and sacred duty of a man or woman to select their life-mate with the utmost care; for when they have so chosen, they have between them chosen the whole ancestry of their child. They have determined the stars that will rule his fate.

The problems of the individual life are linked to the fate of the racial life; and again and again, we will find as we ponder the individual questions, that at all points they ultimately converge toward the same racial end. Among all the manimal predecessors of man, the male is an imposing and important figure in the early days of courtship; but after conception has once been secured, the mother plays the chief part in racial life.

In classic Rome, at one time, the house of a pregnant woman was adorned with garlands; and in Athens it was an inviolable sanctuary where even a criminal might find shelter. It has not always been so, and is not today. Motherhood and the future of the race are systematically belittled.

It is often argued that paternity is but a mere incident in man's life. Why

should maternity be more than a mere incident in woman's life? In England and America, by a curiously perverted form of sexual attraction, women were so fascinated by the glamour that surrounded men, that they desired to suppress or forget all the facts of organic constitution, which made them unlike men, counting their glory as their shame. As we know, there was at the origin, an element of rightness in this impulse. It was absolutely right, in so far as it was a claim for freedom from artificial restriction, and a demand for economic independence; but it became mischievous and absurd when it developed into a passion for doing in all respects, the same things as men. Freedom is only good when it is a freedom to follow the laws of one's own nature. It would be out of place and would lead us too far to discuss here these various practical outcomes of the foolish attempt to belittle the immense racial importance of motherhood.

The development of an industrial system which subordinates the human body and the human soul to the thirst for gold has for a time, dismissed from consideration the interests of the race and even of the individual.

Although in some parts of the world, the women of savage peoples work up to the time of confinement, it must be remembered that the conditions of work in savage life do not resemble the continuous and strenuous labor of modern factories.

The question of sexual hygiene, more especially in its special aspect of sexual enlightenment, rests upon the fact that in all children the activity of intelligence begins to work at a very early age. The question of origin is a

fundamental one in childish philosophies as in more ultimate shape it is in adult philosophies. Thus it is, that at a very early age of a child's life, we are brought face to face with the question: How we may wisely begin his initiation into the knowledge of the great central facts of sex.

We are always making laws for the protection of children and setting the police on guard, but laws and the police, whether their activities are good or bad, are in either case alike,—ineffectual. They can for the most part only be invoked when the damage is already done. We must learn to go to the root of the matter. We must teach children to be a law unto themselves. We must give them that knowledge which will enable them to guard their own personalities.

Coventry Patmore, the great poet, in the essay on "Ancient and Modern Ideas of Purity" in his beautiful book "Religio Poetae," has protested against that disease of impurity which comes of our indivine silence, and Metchnikoff more recently from the scientific side said: "Ignorance must be counted the most immoral of acts."

There can be, we think, little doubt that much unhappiness and a great deal of illness will be prevented if young people of both sexes possess a little accurate knowledge regarding the sexual relations, and were well impressed with profound importance of selecting healthy mates.

Knowledge need not necessarily be vulgar. But even if it were, it is certainly not comparable in that respect with the imaginings of ignorance.

In the future educational programs, sex questions must hold an honorable place.

Dr. Mary Wood Allen urges in her pamphlet, "Child Confidence Rewarded," that the mother should begin to tell her child these things as soon as he begins to ask questions and explains how this may be done; giving examples of its happy results in promoting a sweet confidence between the child and his mother. In this manner, the mother will indirectly be able to safeguard her child at the outset against the prudish prurient notions in life which he will encounter later. will also without unnatural stress, be able to lead the child into a reverential attitude toward his own organs and so exert an influence against any undesirable tampering with them.

In talking with him about the origin of life and about his own body and functions, in however elementary a fashion, she will have initiated him in both sexual hygiene and sexual knowledge.

At puberty more authoritative and precise advice is desirable than the mother may be able or willing to give. It is at this age that she should put into her son's or her daughter's hands some one or other of the very numerous manuals expounding the physical and moral aspects of the sexual life, and the principles of sexual hygiene such as:

Edward Carpenter's, "Love's Coming of Age;"

Ben Elmy's, "Baby Buds," also "Human Flower;"

Mary Tudor Pole's, "The Wonder of Life;"

Margaret Morley's, "Song of Life;" Unknown author, prefaced by J. H. Bradley, "How We Are Born."

Mrs. Ennis Richmond's books, "Mother," are very helpful.

Canon Lyttleton's books are excellent.

Nothing but good can come from the use of such a manual if it has been wisely selected; it will surplant what Mother has already done; what the teacher may still be doing; and what may be done later by private interviews with the doctor.

At a later age during adolescence, there is doubtless great advantage in the plan now frequently adopted, especially in Germany, of giving lectures, addresses or quiet talks to young people of each sex separately.

Stanley Hall, the great teacher of John Hopkins, after remarking that sexual education should be chiefly from fathers to sons, and mothers to daughters, adds: "It may be that in the future this kind of initiation will again become an art, and experts will tell us with more confidence, how to do our duty to the manifold exigencies, types and stages of youth; and instead of feeling baffled and defeated, we shall see that this age and theme is a supreme opening for the highest pedagogy to do its best and most transforming work, as well as being the greatest of all opportunities for the teacher of religion."

A NEW THERAPY IN VARIOLA.

By M. F. Des Marais, M. D. Las Vegas, New Mexico.

(Read before the 32nd Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., October 2nd-4th, 1913.)

That very little or no progress has been made in the treatment of smallpox is well known to every practitioner. That we do not know what the causative factor is, is universally known. That vaccination, if universally applied will stamp out the scourge is a well known clinical fact. That we are still advocating laws that are antiquated for the control and prevention of the spread of the disease, is not so well known.

With the half hearted enforcement of the present laws, regarding vaccination and quarantine, it is a wonder that we have been as free from its ravages for so long. We need to educate the masses. We need health officers who will enforce our archaic laws. We need laws that will compensate the health officers adequately, and above all we need new laws; laws that are in accord with the present era; principally a law that will place the financial burden on those that through their ignorance, prejudice or neglect, refuse to be vaccinated, instead of punishing (financially) those that have sense enough to protect themselves and their families; a law that will supply free vaccine to every citizen within the State. Do not punish a person because he refuses to be vaccinated, punish him when he is dangerous to the community, and make him stand the entire cost that all the people are made to pay now.

I would define Variola as an acute, infectious, seasonal, preventable discase, prevalent in all parts of the world.

Having been deeply impressed with the theory of Schafer regarding infections, knowing that an infection is generally multiple, led me to try a combined vaccine (Stock).

The popular prejudice to anything new made the task rather difficult of accomplishment. The cases being at a distance from each other also prevented a more general trial of the treatment. In the last epidemic of variola in San Miguel County, which started in July, 1912, and lasted until the latter part of May, 1913, 521 cases were seen. Of that number 78 cases were treated with the combined stock vaccine, with results as tabulated below. At the beginning of an outbreak, variola manifests itself in such an attenuated form as to be almost unrecognizable, getting more virulent as the disease spreads. until you have the easily recognizable, unmistakable, typical variola. At the outbreak, nearly all the cases seen had only two, four and not to exceed half a dozen vesicles that were anything but typical. In a number of cases I was ridiculed for making a diagnosis of small-pox, both by the physicians and

Within a month after the first cases were diagnosed there was no question as to the correctness of the diagnosis.

The treatment was given at different periods of the disease as tabulated below, to-wit:

In 32 cases the treatment was commenced from the first to the second day of the disease.

In 11 cases the treatment was commenced before the vesicles umbilicated.

In 15 cases the treatment was commenced after the vesicles had umbilicated

In 20 cases the treatment was commenced from the 8th to the 12th day of the disease, that is, after pustulation had commenced.

RESULTS

32 cases were more or less influenced by the treatment. In a few cases the course of the disease was changed. In each house I had control cases. The cases treated with the vaccine showed an amelioration of the

symptoms, and in some cases the disease was aborted, so that no vesicles appeared, the fever lowered, the pains almost disappeared, and the patient made a quicker recovery.

In 11 cases treated before the vesicles umbilicated, 8 were influenced to the extent that pustulation was almost arrested. In the other three no change for the better was noticed, the cases going through a typical course.

Of the 15 cases treated after the vesicles had umbilicated, in 5 the course was influenced and pustulation was markedly modified, the remaining 10 cases pustulated as without treatment.

In the 20 cases in which the treatment was instituted after pustulation had begun, not a single case was benefited, not a symptom was modified and they went through an uninterrupted typical course.

RESUME

The treatment seems to offer some hope to those in whom treatment is instituted early in the disease, the earlier the better.

It might save the patients from severe complications, even if given before the vesicles have umbilicated. It does not appear to do any good when commenced after pustulation has begun.

THE TREATMENT OF CHRONIC CONSTIPATION.

M. K. Wylder, M. D. Albuquerque, N. M.

(Read by title before the 32nd Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., October 2nd-4th, 1913.)

I have no apology to offer for the selection of a subject, dealing, perhaps,

with one of the conditions most frequently met, and, I might add, perhaps treated with the least intelligence of any of the conditions which we meet. How many of us, on being called on to advise for the treatment of a case of constipation, give them a few pills, which if they do anything, only help to fasten the habit more securely on the unfortunate patient, and are perhaps the worst thing that could possibly be done? The results of chronic constipation on the system are many and in some cases scrious.

This paper is, of necessity, entirely too brief to attempt to go into anything further than the treatment. Suffice it to say that as long as the pronounced constipation is the habit of the body all the organs are bathed daily in blood rendered impure by the absorption of fecal products and the consequences are usually those which might be expected. It would be interesting to determine how far a habit of constipation may be responsible for the gradual development of much graver diseases.

Kelly reports in a series of 500 histories, 164 patients or about 33 per cent, suffering from constipation. These were consecutive histories in his regular practice, which is about the average frequency as reported by other authorities.

The treatment of constipation resolves itself into three parts: first, to prevent, second to relieve the present condition and third, to so regulate the habits of the patient that the bowels will act automatically without artificial aid.

The preventative treatment should be begun with young children of school age, and our educators would do well to look into this matter, and attempt to train children to form regular daily habits of going to the toilet at a fixed time until this habit has become almost second nature.

The treatment of constipation by mental influence is strongly advocated by Paul DuBois in a psychic treatment of nervous diseases. He outlines his treatments so clearly that I desire to quote it:

"I would dare to say that the cure of constipation is certain if one uses these means, but if this treatment is to be efficacious it must be prescribed with entire conviction. This I insist upon, and to those who want to make the attempt I will give the following advice: (1) Draw the patient's attention to the inconvenience of laxatives and enemas; prohibit them altogether; burn your bridges without fear. (2) State that one always succeeds by this intelligent treatment. you have already had some success along such lines in your treatment, describe them with convincing eloquence. (3) Ask your patient when he gets up and takes his breakfast. You can, to a certain degree, take his habits into account. If he gets up at half-past seven, for example, give him the following prescription in writing: (a) 7:30 a.m. -Rise. (b) 7:45 a. m.—Drink a glass of cold water. For those who have a superstitious reverence for medicine give an infusion of quassia prepared the evening before. (c) 8 a. m.— Hearty breakfast with milk, coffee or tea, according to choice, and even chocolate for those who are not constipated by this food. Use bread (Graham, if possible) and butter, with honey or preserves. (d) 9 a. m.—Try to go to the toilet at a fixed hour. Do not go at any other time and refuse to do so. saying to your intestine: 'You would not move at nine o'clock; now you can wait until tomorrow!' (e) Use a copious diet, giving the preference to vegetable foods.

"But do not be content with enumerating these measures and putting them on paper; explain them, comment upon them, and enumerate the 'invitations' which the prescriptions contain. The patient will reply to you: 'But I have already tried to go at a fixed hour. I have already taken a glass of cold water.'

"You can reply to him: 'My dear sir, six cannons can make a breach where one or two are not enough. Go on bravely and you will succeed!'

"And last of all, do not suppress the suggestive effect which you have just produced. An excellent confrere, who for long years practiced this treatment. told me that he was well satisfied with it, but that he had, nevertheless, had some failures. Astonished at this, I made him go over the prescriptions which he had given. They were as complete as though I had dictated them myself. I tried to find the cause of the failure, when my confrere added: 'Howeer, I have never discouraged the patient and I have told him if this does not work there are still other means.' to explain his failures. When one wishes to convince one of anything it does not do to suggest the idea of pos-

To prevent constipation one must see to it that the diet is of the proper sort. Not of concentrated fancy foods or too highly seasoned, and not too much meat, giving the preference to vegetables, simple bulky articles, such as are constantly found on the farmer's table, baked potatoes with the skins on them and insist on the patient eating the skin. Also the skins of fruits, such as pears, apples and grapes; plenty of fresh vegetables, bread with plenty of butter on it, giving a preference to graham bread or whole wheat over the regular white bread—in many cases the usual diet that has been followed by the patient together with so simple a measure as a glass of water on rising in the morning. The water may be taken either cold or hot according to the likes of the patient.

Systematic daily exercise is a necessity. A good long walk, golf, horseback riding, swimming and tennis are all good.

If the abdominal muscles are weak they can be greatly helped by lying flat on the back and rising to a sitting posture without any help from the arms or hands. In elderly patients who are weak and have long suffered from the habit of constipation about the only thing we can do is to give some one of the many laxative medicines at our command. However, most cases of constipation can be overcome by the use of very little medicines. Let the patient remain constipated, if necessary for several days. In the meantime use ordinary diets with the addition of fruits. See that they take plenty of water between meals. See to it that active exercise is taken. Develop the abdominal muscles and encourage the regular habit by waiting on nature at a fixed time. I wish to lay particular stress upon the fact that many cases are greatly relieved by simply getting them to take more water and this is the secret of the famous springs and watering places. At many of the famous resorts an analysis of the water

shows only a few grains of laxative salts to the gallon and hundreds of patients suffering from severe constipation are entirely relieved while taking this cure, simply because of the large amount of water they take and would get the same relief from their own well at home or the faucet in the kitchen if they used their home water as freely.

MOVING PICTURE SHOWS.

Elliott C. Prentiss, M. S., M. D. El Paso, Texas.

Our "Movie" friends need no introduction. They have come among us insidiously, work in the dark and yet are thoroughly welcome. "May their shadow(s) never grow less".

At first it was thought that they would stay for a while, be "rushed", and then peacefully dropped; but they have, without doubt, come to stay—they have true worth. Their field has constantly broadened; originally meant for amusement only, they have influenced our family life and social conditions, are becoming a valuable educational aid, and are destined even to be a factor in the making of our laws.

This is the only cheap and good public amusement that has ever been devised. It interests the whole family alike, young and old, and it is not unusual to see father, mother and children "take in the show"; it is their treat to themselves. When a man comes home from a day's work he wishes not only rest, but to be amused. Too frequently the home does not furnish the latter, and the tendency is to go out and spend the evening with friends, with the temptations of drink, gambling and

bad company. The father does not now so often leave the family at home in the evening, which is the entering wedge of infelicity, but he takes them with him and all are drawn closer. The number of divorces in the country has increased, but these shows have, no doubt, exerted a strong inhibitory effect.

It has been demonstrated that in many cases the success of the saloons in different parts of a city has been in inverse proportion to the number of picture shows in their neighborhood. That tells its own story. The consumption of liquors has increased, but many a nickle and dime has been passed to the ticket girl which would other-wise have satisfied the thirst. Any factor that helps to keep families united and diminish the excessive consumption of liquor, tends materially to reduce law-lessness and crime, and is of incalculable value to the community.

We do not know how much money is spent annually on picture shows, but however large, it is well spent. In this, as in many other things, excesses may occur. The lure of the screen may draw money better spent for bread and necessities. The cashier's receipts are considerable compared with what the community spends for bread, astonishingly so, but the nutrition of the people seems to be about as good now as ever.

As we all know, the ventilation of the halls where the picture shows are held is very poor, and the air full of dust and impurities. No doubt, in winter, many severe colds are contracted here, and the conditions are ideal for the exchange of infections of all kinds. This is a great disadvantage, but one that will be corrected in time. It does

not, by any means, neutralize the benefits that may be received.

Moving picture shows are usually referred to as places of amusement, but it is stretching a point when such things as vile crimes, murder, suicide, hanging, immorality, sickness and death are thrown upon the screen. Many nightmares must have been caused by neurotics and children, who are very impressionable, seeing people bitten by venomous serpents, and the hero or heroine nearly run over by a train. How many men made despondent by family and business troubles, who might have known better days, have received their inspiration from seeing a "movie" take poison! Pictures of crime, hold-ups, safe-blowing and robbery, as well as the dime novels, have a very bad moral effect upon certain individuals, and have been known to lead to attempted copying of the picture. Such pictures are certainly not enjoyable, and many a time have I heard these comments from those who come to spend a pleasant evening: "More trouble;" "Nothing but trouble tonight."

A taste for good things of all kinds is inborn in almost everyone, but has frequently to be brought out by contact and education, in other words, to be "acquired" or "developed." The people really wish to see something instructive and worth while at these shows, and I have heard a great many favorable comments upon pictures that were of some educational value. The film companies cannot justly claim that the present supply satisfies the demand. Many people have turned against the "movies" because of the poor selection of subjects, and on that account alone,

very seldom go.

The moving pictures are now, and will become more and more, as time passes, a valuable educational aid. In them, a great and unlimited factor for good has been introduced. There is a constant improvement in the technique of film manufacturing, and much has been accomplished in the past five years. The "real things" are shown, and there is no, or very little, necessity for those products of civilizationimitation and misrepresentation. should be stated where the pictures are taken; this is too seldom done. cost of producing good pictures, as those of travel and natural history, should be less than that of worthless crime stories and comedies. The former are of lasting value, and far superior to screenizations, as we might say, of even good literary works.

It is acknowledged now by educators that pupils learn best, that is, understand and retain, subject matter that is interesting to them and presented in a manner that will hold their attention. By "pupils" we mean people of all ages; we should never cease to be students. We only begin to learn in our school days. The factor of variety and change is of importance; one subject should not be continued long enough to become tiresome. J. J. Rousseau, the great French philosopher and author, was one of the first to bring forward this idea, but he caried it a little too far. The moving picture shows fulfil these conditions ideally, with the added advantage of being the least possible strain on the mind. Learning by sight requires less attention and mental effort on the part of the pupil than by lectures and books. They, of course, cannot take the place of the latter, but are a very valuable aid. The time will come when a first class moving picture outfit will be considered a necessary part of the equipment of every educational institution.

The field from which to make good pictures is absolutely unlimited; history, legends, travel, customs of peoples, industries, manufactures, art, natural history, science, sociologic conditions, and every conceivable thing that can be seen are at our command. What a tremendous opportunity wasted! Plant and animal life can be shown in a way never to be forgotten. In addition to the latest worthless fashions, one may see correct methods of dressing, hygiene, house-keeping hints, venscience, tilation, domestic phases of cooking, and many other things of value in everyday life. Such pictures will stimulate one's desire to know more and will result in increased study and reading.

The laws in a country such as ours, are largely the crystallization of public knowledge and opinion; this should not be so, but it is. They should always be based upon what is known to be best, and not upon average information, and their making in every line should be under the guidance of experts. Our medical laws in this respect are sadly deficient. How little the average layman knows about medicine! The medical profession, when it tries to have good laws passed, is looked upon with suspicion, and its suggestions cast aside as worthless. The giving to the public of reliable information is a necessity, and in this instance picture shows, if used properly, can render valuable assistance. Not only is a certain amount of education of the public on medical questions needed for the passage of good laws, but it is especially necessary for their enforcement. It is very difficult to enforce many hygienic laws against opposition.

Nearly all phases of public health work are susceptible to demonstration on the screen. I understand that it has been brought into use in the Southern states in the hookworm work. A recent number of the Journal of the American Medical Association contains a very good article by Armstrong on its use in the campaign against the house-fly and diarrhoeal diseases of children in New York City. "Tuberculosis pictures" have already done a great deal of good, but can do many, many times as much if put into more general use.

The causes of the most important parasitic diseases can be shown, and a demonstration of the bacteria, properly stained, and the animal and vegetable parasites should be intensely interesting. A terrible campaign of extermination would result if magnified flies, roaches, bed-bugs, fleas and lice would be thrown upon the screen.

A good demonstration of some of? the most important diseases would interest the public. Malaria: show both normal and pathologic blood, stained and unstained; plasmodia in the various stages of development; the malarial mosquito, giving name, and differentiation from harmless species, with the life history of the former; where bred,—in stagnant water and marshes, with methods of oiling them; and ending with the prevention of the disease.

Typhoid fever: the bacillus, transmission by the fly and other means, and predisposing causes and methods of prevention.

Rabies: how to diagnose it in dogs; its presence in other animals; what to

do in case of a bite; and then take up in detail the unclean habits of many of our pets, and show what really occurs when we fondle them, and allow them to lick our hands and face.

Following this general scheme pictures of yellow fever, plague, cholera, amoebic dysentery and barber's itch would be both interesting and instructive.

Some time ago I saw a very complete picture of the sleeping sickness that was, indeed, a remarkable one. It was well enjoyed by the public, but probably not one in a thousand fully appreciated it. In it, among other things, was shown a slide of fresh blood in which was moving actively the trypanosoma, the parasite of the disease; this had evidently been taken through an oil immersion lens!

The picture mentioned above, elaborated of course, and many others, could be of value in medical schools. Rare diseases, in the absence of clinical material, could be well demonstrated.

In many pictures at present shown, injustice is done to physicians, nurses and hospitals, and we rarely see other than a poor demonstration of diseases, action of drugs, death scenes and medical matters generally. Such pictures should be made with the cooperation of physicians. It is an easy matter to so distort hospital scenes as to make them a deterrent to many of the laity who are uninformed, and who later need hospital treatment.

A proper exposition of medical and surgical methods cannot do other than benefit the medical profession, and should diminish the distrust that is so firmly rooted in the minds of many people. It should do away with the reluctance that not a few have in sub-

mitting to the proper medical and surgical treatment. The difference between unscrupulous quack and honorable methods can easily be thrown upon the screen. The moving pictures can be of inestimable service to both profession and laity, so let us, by all means, do everything we can to help "throw on the light."

Abstracts

Mental Disease.

The factors in the etiology of mental disease are discussed by F. X. Dercum, Philadelphia (Journal A. M. A., March 7), who divides them primarily into two groups -the intrinsic, embraced in the great factor of neuropathy, and the extrinsic causes, the infections, intoxications, visceral diseases, metabolic disorders, trauma, etc. By neuropathy he understands a fundamentally defective or aberrant nervous organization shown by peculiarities of mental development and more or less by physical abnormalities in many cases. It is not surprising that individuals with these defects should break down under the ordinary stress of living, and that such breakdowns occur in early life, giving rise to insanities of the juvenile period and puberty, and also later causing the paranoid affections of the adult. The relations of neuropathy to heredity are noticed. The hereditary factors are present in a very large proportion of the insane, especially in manic depressive insanity, dementia praecox and paranoia. This heredity is of two kinds: in one of which a specific neuropathy and in the other one a more general one is transmitted, but both of these may be combined in some cases. Where the extrinsic causes come in play, the neuropathic factors in heredity are also often active. Infletions, trauma, etc., are only causes of mental breakdown where the resistance is weak. The psychic causes, of which much was made by the older authors, have latterly been considered of less importance. At the most, Dercum says, they act as an incidental support or framework on which the delusional or obsessional feeling can secure a hold or obtain concrete expression. From this point of view he passes to the consideration of the Freudian psychology and methods of psychanalysis, which he subjects to a severe criticism. They recall the writings of Janet, to whom he thinks Freud and his followers have given too little credit. He charges them with formulating differences based on doubtful inferences and questionable hypotheses, and says that this is very evident in the Freudian explanation of dreams. According to Freud's method, the psychanalyst can find most anything that he is looking for, and there can be no doubt but that he always finds it. It is a matter of proper inquiry whether or not psychanarysis is harmful, and Dercum refers to Hoche's inquiry on the subject as indicating that it may be so. The psychology of insanity, Dercum says, is one thing and psychanalysis is another, and Freud and his followers are classed by him with the Christian Scientists as a sort of an outcome of the mystic tendencies of the modern times. He prophesies that in the course of time it will pass away, together with other delusions like Eddyism, Dowieism, etc., and the medical fads that from time to time have had their day.

Tuberculosis.

The spread of tuberculosis is considered by A. P. Francine, Philadelphia (Journal A. M. A., March 27), as regards its social, economic and medical aspects.

The plague flourishes in the homes of the ignorant and in the slums, and housing conditions alone cannot account for it. We must take into consideration also ignorance, carelessness and alcoholism as factors. We must not too readily credit many kinds of labor as the cause (eliminating, of .course, infected workshops) They come nearest to being a cause where certain kinds of dust are inhaled, but they mainly act through reducing resistance. Antituberculosis campaigns and all other kinds of public health work act together and we must not confine our efforts too strictly to this one disease. On the medical side we must recognize two great factors: First, close association with the disease in others with careless habits, and second, the vulnerability of childhood. Ordinary intercourse or occasional contact and consequent inhalation of the germs are not liable to give rise to pulmonary consumption in the adult, but this must not be interpreted as condoning carelessness in this regard. It is largely children affected by contact in their homes that furnish the coming crop of consumptives. The early glandular type may show itself only in anemia under development, etc., and in the tuberculin reaction. He quotes authorities to show that the majority of children above 14, especially of the working and poorer classes, and nearly all adults are infected at some time or other. The decreasing death-rate from tuberculosis in cities is accounted for by Newsholme by the greater recourse taken to institutional treatment, and with this Francine agrees. We should also consider the fact of acquired immunity, of which so much is made by recent authorities, some even holding that early infection protects against later disease, and this element of racial or communal resistance cannot be ignored. Since tuberculosis is the most

common infection of childhood we must get rid of the distinction of the so-called medical and surgical tuberculosis. The problem of prevention, Francine says, must take into account not only the care and isolation of the consumptive himself, but also the care and development of the children who have been infected or exposed and probably also the development of the specific racial immunity. He also emphasizes the interdependence of the tuberculosis campaign and all efforts for the common welfare.

Rare Gonorrheal Involvement.

M. Zieglar, New York (Journal A. M. A., March 7), reports a case of infection of the skin of the prepuce by the gonococcus and its cure by a conservative plastic operation after failure of local applications of hydrogen peroxid and mercuric chlorid. Circumcision was considered impracticable on account of the extent of the infection.

Aspirin Idiosyncrasy.

E. N. Reed, Clifton, Ariz. (Journal A. M. A., March 7), reports the case of a patient who, after taking a capsule containing 5 grains of aspirin for a cold, was taken with vomiting in about half an hour, followed by a "stiffness" in the throat making him think he was developing a tonsilitis. An hour and a half after taking the capsule his face was swollen and cyanotic, the eyelids edematous and almost closed and the conjunctiva injected, the whole face swollen, the breathing was labored and asthmatic, the nasal mucosa gorged, preventing nasal breathing, the buccal mucosa and pharynx were dark red and swollen, the uvula twice its normal size. The pulse was 120, soft and full, temperature 98. The breathing was such as one might expect with edema of the glottis. No

treatment was instituted; the symptoms largely disappeared in six hours, but there was a fine, papular rash on the trunk the next morning. The patient reported a similar experience about a year before, after taking a capsule of $2\frac{1}{2}$ grains each of aspirin and phenacetin.

New Sign in Pneumothorax.

In a careful study of eleven cases of induced and artificial pneumothorax in consumptives, J. L. Pomerov, Monrovia, Cal. (Journal A. M. A., March 7), has observed in every case a spasticity and rigidity of the rectus and other abdominal muscles in the upper quadrant of the abdomen on the same side as the lesion. In his most recent case the spastic condition of the upper segment of the left rectus and the region of the epigastrium was so marked as to make a visible tumor. The patient, a physician, noticed this himself and was much interested, as it seemed to vary with the tension of the chest. The area was also hyperesthetic. The symptom is constant in all cases, but so far as he has seen has not been noticed previously in pncumothorax. He hopes that if it is verified by other observers it will prove a valuable guide in the production of artificial pneumothorax. A fuller report is promised.

The Heart in Pneumonia.

R. F. Fennell, Guntersville, Ala. (Journal A. M. A., March 7), suggests the importance of the pressure on the pulmonic circulation and the aided labor of the heart in pneumonia as a point of special importance in the treatment of this disease. Hence the guide as to the immediate condition of the pneumonia patient is the quality of the pneumonic second sound of the heart, heard best in the second interspace just to the left of the sternum. So

long as the sound of the pulmonary valves is accentuated and imparts 'a snapping quality, we may rest assured that the right heart is doing its work well. When this is lost and cyanosis supervenes the right heart is becoming incompetent, and it is necessary to reduce the pulmonic pressure for its relicf. Strychnin aggravates such a condition, and to give the heart a chance to recover, he advises the patient being placed in a semirecumbent position and nitroglycerin, 1-100 grain, given every two hours if necessary. This should be discontinued if any signs of edema of the lung appear and 1-100 grain of atropin given instead, with due caution after three doses. The whole body except the head should be enveloped in a mustard pack and artificial heat applied. The patient should remain in the pack until the skin is red and the pack repeated as often as needed to retain redness.

Whooping-Cough.

A. Friedlander and E. A. Wagner, Cincinnnati (Journal A. M. A., March 28), find that the complement-deviation test is of the very greatest value in the diagnosis of whooping-cough though Bordet himself, who described the bacillus, concluded that the complement-fixation was not an early sign. Their technic for the test is described as follows: "A small amount of blood was taken from the patient's car, finger or toe in small testtubes or the Wright capillary tubes. This was kept at room temperature or placed in the incubator until coagulation had taken place. Serum was then separated more completely from the clot in the centrifuge. So far in our tests only the fresh active serum has been used. Two drops of the serum were used in each test. Hemolytic System. The Noguchi system was used, because of its extreme delicacy and

because of the small amounts of material. especially serum, required. Antigen: This is the most important factor in the test. The Bordet-Gengou bacillus was obtained in pure culture from the laboratories of Parke, Davis and Co. Most of our work was carried on with this culture. Cultures were also obtained from the H. K. Mulford Company and Dr. F. B. Mallory of Boston. The latter culture came from a strain grown at Theobald Smith's laboratory. Subcultures were made on Bordet's medium, ascitic fluid agar and broth serum. The antigen was made from seventy twohour growths in ascitic fluid agar in the following manner: The colonies which are very tenacious, were washed off the agar with sterile salt water. An emulsion was made, and the bacteria again washed in salt water. From this a standard suspension was made and 0.1 and 0.2 c.c. of this used in the test. Throughout the tests live bacteria were used. Controls: In each series of tests the hemolytic system was tried out in the usual manner, using a waterbath at 37 C. for incubation. After primary incubation for half an hour the amount of amboceptor indicated by the preliminary test was added to our final testtubes, and the tubes again incubated in the water-bath. Final readings were taken within the following hour." In each case independent readings were taken by the two authors without previous knowledge of the clincal history and the tabulated results are given showing their uniformity of positive reactions in cases of pertussis as compared with other conditions. They call special attention to the need of fresh antigen in the test.

Syphilis Diagnosed as Diphtheria.

A case of syphilitic sore throat seen while diphteria cases were in the community and giving rise to a white membrane in the throat, diagnosed as diphtheria, is reported by E. L. Glaze, Athens, Ala. (Journal A. M. A., March 28). Antidiphtheritic treatment was employed and the eruption that followed was attributed to the antitoxin; the result was a specially malignant case of syphilis. The case is reported on account of the mistake in diagnosis and in not promptly revealing the true nature of the disease in time. It also shows the importance of more thorough examination of all cases.

Formaldehyd.

Hugh McGuigan, Chicago (Journal A. M. A., March 28). has studied the migration, fate and changes of formaldehyd in the body. He reviews the former literature of the subject and the claims of beneficial action of formaldehyd vapor inhalation as made by some authorities. He publishes protocols of his experiments showing that it is rapidly absorbed from the lungs and the gastro-intestinal tract and that formic acid is easily produced in the body from formaldehyd. Small doses disappear rapidly from the blood. When injected intravenously it causes a fall in pressure corresponding to the amount received and its disappearance from the blood seems to occur paripassu with the rise of pressure to the normal. The short retention of formaldehyd in the blood partly explains this failure to benefit cases of sepsis and tuberculosis. Any reported benefit following intravenous injection must be attributed, as commonly accepted, to the saline given with it. After absorption there is a slight, temporary stimulation of respiration and a cardiac depression which soon return to normal. After large doses and to some extent after small ones, it causes edema and only after large doses do we find anything like the marked inflammatory changes recorded by Fischer. As expected we find formaldehyd in the body in some places as we find hexamethylenamin but not so widely distributed. It is excreted mainly in urine, gastro-intestinal tract and by the lungs. Bayer's theory that the formation of sugar in plants is due to a condensation of formaldehyd into dextrose is not credited by the author. He finds no facts in favor of its internal use and no special affinity for bacteria. Within the body the evidence favors the opinion that it preferably unites with dead material or inorganic bodies. It neither exercises any selective action on invading organisms nor stimulates protective mechanisms so far as has been shown.

Recovery from inflammatory reactions may be apparently complete. It causes a stimulation of the intestinal movements, with large doses extreme. He concludes that the antiseptic action of formaldehyd is apparently due to fatigue, exhaustion, and a final firm combination with the drug and there is nothing to indicate its usefulness in medicine other than for local use.

Crotalin.

Rattlesnake venom recommended by Spangler in 1910 for epilepsy, has been examined by J. F. Anderson, director of the Hygienic Laboratory, Washington, D. C., who reports a fatal case in which it was used (Journal A. M. A., March 21). Since Spangler's paper there have appeared reports of its use for other conditions, including tuberculosis, all based on purely empiric grounds. Anderson points out that a sterile solution cannot well be assured. Spangler himself says that the patients vary greatly as regards the swelling, erythema, and cellulitis produced by the injection of rattlesnake venom and this Anderson is inclined to attribute more to lack of uniformity in the remedy than to varying susceptibility on the part of the patient. A severe local reaction, he says, is more likely to make a more profound psychic impression, to invite secondary infection and especially to favor the growth in the tissues of certain anaerobic bacteria such as are found in the fatal case he reports. Weir Mitchell many years ago pointed out the great possibility of a secondary infection in a survivor in acute rattlesnake poisoning and also called attention to the rapid decomposition following death from snake poison. Welch and Ewing in 1896 showed that rattlesnake venom almost completely destroys the bactericidal properties of the blood and this has been confirmed later by Flexner and Noguchi. The laboratory findings in the case reported left no reasonable doubt that the death was due to the presence in the crotalin solution of pathogenic bacteria which were also shown to be present in the other ampules in the same lot as those used. The hygienic laboratory has taken up the examination of samples of crotalin solution and tablets. Anderson says: "Summarizing the results of the cultural work with the samples of crotalin solution, it is sufficient to state that there were tested for sterility ninety-five ampules of evetalin solution, prepared by four different firms, thirty-five of which (38.8 per cent), were found not to be sterile. It is proper to state that in the great majority of instances the contamination of the crotalm was found to be with anaerobic organisms, and to all appearances usually with a certain anaerobic bacillus." Every (twelve) examined found .not was sterile and while more than one organism was present an anaerobic bacillus was found in every one. The tests for rattlesnake venom was made by inoculation of guinea-pigs and in every sample it was found present. The bactericidal power of the venom in the blood and the antiseptic power of the preservative used (usually trikresol) and Anderson beserves that a neglected bearing on any sterility tests that may be made by the dispensers of crotalin. It may be accepted that a dried venom contains a greater or lesser number of bacteria and cultural tests may not always detect them. Added to this we have the favorable condition for their growths in the local necrosis produced. Considering the many morbid conditions for which crotalin has been suggested, he thinks it is possible inherent dangers should demand the utmost caution in its use.

Temperature in Tuberculosis.

An anomaly in temperature curve and pulse-wave not described in any text-book consulted and very little mentioned in the literature of tuberculosis is described by John Ritter, Chicago (Journal A. M. A., March 21), as follows: "If in a slightly advanced tuberculosis subject the pulsewave and temperature-curve are very carefully observed in the early morning immediately on rising, always in the sitting posture, these observations minutely noted, and the patient then directed to proceed to make necessary preparations for dressing, such as brushing the teeth, shaving, washing, combing the hair, then dressing, all of which should consume about thirty minutes, and then asked to sit down and the pulse and temperature again carefully taken, one will observe that the pulse has increased in frequency from 10 to 12 beats, but that the temperature has dropped correspondingly from 0.2 to 0.6 degrees." As a control to these findings, he obtained the early morning temperature of a number of nurses and medical students, taking a second observation about thirty minutes after the first, both very carefully and accurately taken daily for one week, the subjects being presumably in normal health.

In every case a slight increase from one to four beats was noted, but no change in temperature. He also has had the patients make the observations for him, and some of them have called particular attention to the phenomenon in their own cases. In looking over the literature of the last few years he has found but a single reference to this symptom. A careful study might show it to be of great diagnostic value, not only in moderately advanced eases, but more particularly in early or supected cases. It would be necessary for a great many of these observations to be made for a long time and through the course of the disease and compared with the temperature curves of the perfectly healthy.

Book Reviews

The Clizies of John B. Murphy.

THE CLINICS OF JOHN B. MURPHY, M. D., at Mercy Hospital, Chicago. Volume III, Number 1. Octavo of 190 pages 91 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Published Bi-Monthly. Price per year: Paper, \$8.00. Cloth, \$12.00.

The first number of the third volume of Murphy's Clinics is before us full of interest and information and is probably the most important number of the issues to date. We are told that with the next number there will begin a series of lectures by Doctor Murphy on some special topic relating to Surgical Diagnosis and these will be awaited with interest and expectation.

In addition to a large number of interesting cases reported, this number contains a lecture by Sir Rickman J. Goodlee of England; one by Doctor Ceo. W. Crile of Cleveland; one by Doctor Geo. Emerson Brewer of New York; one by Herbert Paterson of London. Each of these distinguished man deals with some subject specially related to surgery.

To those of our readers who have not yet seen Murphy's Clinies we say that this is a good number with which to begin.

Materia Medica, Pharmacology, Therapeutics and Prescription Writing.

Materia Medica, Pharmacology, Therapeutics and Prescription Writing. For Students and Practitioners. By Walter A. Bastedo, Ph. G., M. D., Associate in Pharmacology and Therapeutics at Columbia University. Octavo of 602 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$3.00 net.

This book is an adaptation of the lectures of the author delivered at Columbia University.

The author has emphasized throughout the work, the value of research both in the laboratory and at the bedside and has made clear that the physician's reason for the study of remedies is the treatment of the sick.

We are particularly well pleased to note that the author tends to a better understanding of fewer drugs and a more intelligent use of them. In this day of proprietary preparations and new drugs it seems a strange thing to hear a voice raised in defense of fewer drugs, but after all is said and done, how many of the newer drugs have found a permanent place in medicine?

We welcome therefore, doctor Bastedo's contribution to the literature for its practical value and conservative tone, and feel sure that the reading physician will find much in its pages that will help him to be a better prescriber of drugs.

New and Nonofficial Remedies.

Journal of the N. M. Med. Soc., Las Cruces, N. M.

Since publication of New and Nonofficial Remedies, 1914, the following articles have been accepted for inclusion with N. N. R.". Those accepted during the current month are made prominent by the use of capitals.

H. M. Alexander and Co.:

TYPHOID VACCINE, IMMUNIZING

B. B. Culture Laboratory:

B. B. CULTURE

Farbwerke Hoechst Co.:

Amphotropin

Fairchild Bros. and Foster:

Trypsin

Hoffmann—Laroche Chemical Works: THIOCOL, SYRUP THIOCOL, ROCHE Hynson, Westcott and Co.:

Phenolsulphonephtalein, H. W. and Co.,; Phenolsulphonephtalein Ampoules, H. W. and Co.

Merck and Co.:

CEROLIN

H. K. Mulford Co.:

Anti-Anthrax Serum, Mulford; Antistreptococcus Serum Scarlatina, Mulford; Disinfectant Krelos, Mulford; Salicylos; Staphylo-Serobacterin; Strepto-Serobacterin Typho-Serobacterin.

E. R. Squibb and Sons:

TETANUS ANTITOXIN, SQUIBB Thiocol and Syrup Thiocol, Roche readmitted to N. N. R.:

The advertisements of Thiocol and Syrup Thiocol, Roche to the public in the form of Sirolin having been abandoned here and abroad, the Council has readmitted Thiocol and Syrup Thiocol, Roche to New and Nonofficial Remedies (see above).

W. A. PUCKNER, Secretary.

Council on Pharmacy and Chemistry.

Since publication of New and Nonofficial Remedies, 1914 and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Trypsin, Fairchild.— A powder consisting of the proteolytic enzyme of the pancreas, separated to a considerable extent from the other enzymes and constituents of the gland and of a definite strength. Trypsin digests proteins and neucloproteins in slightly alkaline media. Fairchild Bros. and Foster, New York (Jour. A. M. A., Mar. 7, 1914, p. 776).

Cerolin.—Cerolin consists of the fats, cholesterins, lecithin and ethereal oil extracted from yeast by alcohol. Experiments have indicated that the laxative action of yeast depends on the fats and lipoid constituents and that in skin affections these substances have the action of yeast itself. Hence cerolin, marketed in the form of cerolin pills, one and a half grains, is said to be useful in furunculosis, acne and in other skin affections. It is also said to be useful in habitual constipation. leukorrhea, erosions of the vagina and cervix and in similar diseases. Merck and Co., New York City (Jour. A. M. A., March 21, 1914, p. 931).

Refined and Concentrated Tetanus Antitoxin, Squibb.— For description see New and Nonofficial Remedies, 1914. Marketed in the form of syringes containing respectively an immunizing dose and a curative dose. E. R. Squibb and Sons, New York (Jour.A. M. A. March 21, 1914, p. 931).

Typhoid Vaccine (Immunizing). — For description of typhoid vaccine see N. N. R., 1914, p. 259. It is prepared according to the method of the U. S. Army Laboratory.

Marketed in ampule and syringe packages each containing 500 million, 1000 million and 1000 million killed typhoid bacilli. H. N. Alexander and Co., Marietta, Pa. (Jour. A. M. A., March 28, 1914, p. 1014).

B. B. Culture.—A pure culture of Bacillus Bulgaricus marketed in bottles containing 90 Cc. Intended for use in intestinal indigestion and for the enterocolitis of infants. B. B. Culture Laboratories, Yonkers, N. Y. (Jour. A. M. A., March 28, 1914, p. 1014).

Propaganda for Reform.

Amorphous Phosphorus.—Amorphous or red phosphorus is chemically most inactive and pharmacologically is generally considered without action. Now Dr. I. L. Nascher proposes amorphous phosphorus as a remedy of remarkable value for arteriosclerosis of old age-but produces no reliable evidence for his claim. Based on Nascher's assertions Sharp and Dohme advertise Pill Phosphorus Amorphous S. and D. as a successful method of treatment for senile arteriosclerosis. The asserted actions of amorphous phosphorus are such as may be calculated to appeal to the sexual neurasthenic and the advertisements are likely to bring about an extensive use of the drug by the uncritical. The psychic element which plays so large a part with the sexual neurasthenic will bring favorable reports on the drug-at least for a while-just as at one time phosphorus had a vogue (Jour. A. M. A., March 7, 1914, p. 793).

Red Phosphorus.—I. L. Nascher in a letter to the Journal states that he has had nothing to do with the exploitation of Pill Phosphorus Amorphous S. and D. He admits that he has no experimental hasis for the use of this remedy and that his theory is simply a theory without facts to

prove it (Jour. A. M. A., March 28, 1914, p. 1933).

Towns' Epilepsy Treatment.—This nostrum, formerly sold as Towns' Epilepsy Cure, is a bromid mixture that is taken indiscriminately by the public in doses that no physician 'would dare prescribe. The nostrum is given an editorial commendation in The Western Christian Union (Jour. A. M. A., March 7, 1914, p. 794).

The Absorption of Iron from Mineral Waters.—It is now generally admitted that both forms, organic and inorganic, of iron compounds can be absorbed and satisfactorily carry out the purposes for which they are ordinarily administered. Recent investigation has shown that iron salts are absorbed from natural waters (chalybeate waters) in which they occur and there is no reason for supposing that these cannot facilitate hemopoiesis and hemoglobin formation, if there is a deficiency in the iron-containing component of the blood, precisely as medicinally administered iron may. They seem to possess no advantage, however, over the latter (Jour. A. M. A., March 14, 1914, p. 856).

The Danger of Crotalin.-A death from infection from the use of crotalin is reported by J. F. Anderson of the U. S. Public Health Service. Out of 95 ampules of crotalin solution, from four different manufacturers, 35 were found to be contaminated; further, 12 tablets were examined and all found to be contaminated. It was demonstrated that there was a variation in the activity of different lots of crude venom and also in the solutions prepared by the same or different manufacturers. The report emphasizes the dangers of the use of rattlesnake venom or crotalin for the treatment of epilepsy (Jour. A. M. A., March 21, 1914, p. 934).

Radium Therapy.—The value of radium in the treatment of constitutional diseases has not been demonstrated. While some clinical evidence has been introduced to show a favorable effect from radium preparations, the interpretation of such evidence is always beset with difficulties; it is hard to separate the improvement which arises from psychic influence from that which rests on an objective basis (Jour. A. M. A., March 21, 1914, p. 952).

Citrolax.—Advertisements suggest that Citrolax is magnesium citrate in tablet from and superior to the regular magnesium citrate solution. Examination of Citrolax in the A. M. A. Chemical Laboratory showed that the tablets when treated with water did not give a clear solution. The watery solution was found to contain magnesium, sodium and citrate, while the insoluble portion was found to be phenolphthalein equivalent to $3\frac{1}{2}$ grains of phenolphthalein per tablet (Jour. A. M. A., March 21, 1914, p. 949).

Thoxos.—Thoxos is offered to physicians by John Wyeth and Brother for the treatment of rheumatism, rheumatic arthritis, gout, etc., with the following incomplete statement of composition: "It is a palatable solution of Strontium and Lithium soluble salts, thirty-two grains, combined with twenty-four minims Wine of Colchium Seed and a vegetable alterative, in each Fluidounce, flavored with aromatics." From an examination in the A. M. A. Chemical Laboratory it was concluded that Thoxos contains strontium salicylate, lithium salicylate, small quantities of sodium salicylate, free salcylic acid and potassium iodid, and probably also colchium and sarsaparilla. As strontium and lithium salicylate are generally considered to have about the same action as sodium salicylate, Thoxos may be considered as equivalent to a preparation containing in each dose of one teaspoonful 3 grains of sodium salicylate with a fractional dose of colchium and potassium iodid (Jour. A. M. A., March 21, 1914, p. 949).

Mercuric Chlorid and the Public.—In commenting on the use of mercuric chlorid tablets by the public and on the attempts to check this by special legislation, M. I. Wilbert points out that the exploitation of this drug under non-descriptive titles such as "antiseptic tablets" is partially responsible for their indiscriminate use. The fact that they are given a distinctive shape or color does not serve to protect the purchaser if he is uninstructed as to their contents; instead, it tends to elaborate on the misuse of the tablets. Physicians are to some extent responsible for the public

use of tablets of corrosive mercuric chlorid, for in the past, these tablets have been prescribed or given to patients, for antiseptic purposes without sufficient precaution as to their poisonous character (Jour. A. M. A., March 28, 1914, p. 1042).

Radium and Ethics.—Referring to enthusiastic statements by physicians relative to the curative value of radium emanations, the Edinburgh Medical Journal asks if there is much difference between the advertisements of any catch-penny patent cure-all and such announcements. It is pointed out that the public is only too ready to believe any tale as to the value of radium as a cure for gout, rheumatism and cancer and hence the medical profession should absolutely refrain from publicly encouraging such notions (Jour. A. M. A., March 28, 1914, p. 1044).

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The New Mexico Medical Iournal

Volume XII MAY, 1914 No. 2

$E \cdot D \cdot I \cdot T \cdot O \cdot R \cdot I \cdot A \cdot I$

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WITH THE MANAGING EDITOR.

The managing Editor has, from time to time, called the attention of the readers of this Journal and particularly the attention of the members of the New Mexico Medical Society to the necessity of mentioning the Journal when writing to advertisers. At the risk of being a bore to some of the readers we feel that we cannot impress too strongly upon our members the value of such reference in writing to those who patronize our Journal, for, as the Kentucky Medical Journal remarks, "these advertisers really publish the Journal." The more advertising we can obtain, the better and larger the Journal we shall be able to give you and the more you patronize the advertiser who patronizes us, giving the Journal credit, the more advertising we shall be able to command, and, as says the Journal of the Medical Society of New Jersey, "only ethical advertisements of reputable firms are admitted in our Journal so that by patronizing our advertisers we are not only helping our Journal but also serving ourselves and our patients' best interests in securing reliable goods."

The New Mexico Medical Journal stands for ethical medicine. We must stand or fall on this principle. No advertisement is admitted that is not ethical and in the matter of proprietary preparations, that do not bear the stamp of approval of the Council on Pharmacy of the American Medical Association, and in this course we know we have the moral support of the profession in New Mexico. But the moral support of the profession never did and never will publish a Journal. We need and must have the active support of the members all the time. This active support can be manifested in a variety of ways. One of these is the patronizing of our advertisers; another is the securing of local advertisements for the Journal; another is the insisting that the secretary of YOUR county medical society report the proceedings of YOUR county society meetings; another is the reporting of your interesting clinical cases and so on.

Recently the Managing Editor wrote to a number of the members of the New Medical Society urging them to furnish their papers and report their interesting cases. Out of a large number of letters written (we prefer not to say how many) three replies were received. Two of these replies promised

papers and a third sent us a most interesting report of a case. In other words results were really obtained from JUST ONE MEMBER. This makes us wonder if our members really realize that the Journal needs them—needs them all the time. We know that in New Mexico there is as capable a medical profession as can be found in any state in the Union and we know that there are the usual number of interesting cases, but how few of these cases ever find their record in the New Mexico Medical Journal.

Not long go one of the members of the State Society made the obversation to the Managing Editor that there was room for improvement in the New Mexico Medical Journal. We admitted it without an argument. But who is going to improve it? The Managing Editor alone? Nay, not so. The Managing Editor can only do a part; the members must rally to the support of the Journal's reading pages as well as to the support of its advertising pages.

Some may say they are too busy,—the Buffalo Medical Journal recently published a list of over a hundred and fifty titles of articles written by the lamented Roswell Park. He too was a busy man, yet he found time to enrich medical literature, and while we may not all be Roswell Parks, we can find time to record the interesting and instructive case for the benefit of the profession and humanity. The busiest man is really the man who usually commands the best clinical material.

Stir yourself, then, members and tell of your successes and failures through the columns of YOUR Journal.

We are not alone in our misery, if misery it be called, when it comes to running short of original articles for publication. The editor of the Michigan Medical Journal is in trouble too, if we are to judge by the following:

"As this edition goes to press there remain in our drawer, which we utilize for filing original articles, but two papers for publication in our May number. Hence we are flying a signal of distress.

"The Journal is running on an average of ten original articles in each issue. This means one hundred and twenty original articles a year. Surely our State, containing 4,000 physicians, is capable of supplying its official publication with one hundred and twenty high grade, instructive, practical and valuable original articles, and not cause your editor to go begging for copy. We are confident that you will immediately respond to this call and so obviate our sending out our May number with but two original articles."

When our May issue goes to press, this issue if you please, not a single original remains in our drawer for publication. Hence, we too, find it necessary to fly the signal of distress and YOUR editor IS begging for copy for we cannot allow the June issue to go to press without a single original article.

PEST HOUSES.

The subject of small-pox is always pertinent in this region, where the disease is endemic and so common. History teems with horrible epidemics of this scourge and it is largely on this account, as well as the fact that the lesions are principally on the skin, where they can be seen, and the disfig-

urement frequently left, that the laity has such a repugnance to it. It is in every sense of the word, a "pest." The mortality does not account for the term, as the frequency and mortality are very slight to what they were before the days of vaccination. If proper prophylactic measures could be enforced the disease could be easily eliminated.

Is the infectiousness of small-pox for those who have not had it, or for the unvaccinated greater than in the case of the exanthemata for children who have not had them? Probably it is slightly or moderately, but not greatly. There is not one-hundredth the danger of a fairly recently vaccinated person contracting small-pox that there is of a child taking whooping-cough or scarlet fever. Among the whites of this country the disease does not kill anything like as many people as the exanthemata, and its ravages are nothing to those of typhoid fever, lobar pneumonia or tuberculosis. As far as being a "pest" is concerned, variola is not in the same class with the above mentioned diseases.

In all infectious diseases but this the patient is allowed to be isolated, treated and nursed in his home, when there are proper facilities for doing it, but in the case of small-pox he is forced into a "pest house," where too frequently he does not receive either the proper medical attention or nursing. "pest houses" are not the wellequipped, modern hospitals for the treatment of the infectious disease, small-pox, that they should be. Many of these institutions are under the management of non-medical men, and are not run in accordance with proper hygienic rules.

Too often individuals who have been exposed to the disease have been forced into "pest houses" to pass the period of incubation and have been thrown in daily contact with convalescents, and are placed in much more danger from that source than from the original exposure. They are even forced from their homes on this account, when isolation could be carried out there with safety to others. The efficacy of disinfection of rooms in which small-pox patients have been has been proved beyond the shodaw of a doubt.

People have a horror of the term "pest house," and justly so. It is a relic of the dark ages and should be dropped. It is incorect in both words. "Pest" should not be more applicable to small-pox than to other scourges mentioned above, and "house" is certainly not the proper word to use for a hospital for the treatment of infectious diseases. The correct term is "small-pox hospital," and we respectfully suggest to all administrative and health officers that they substitute this for that obsolete blight, "pest house." P.

DISEASE DANGERS OF MEXI-CAN INVASION

The possibility of war with Mexico has been before our people for some time; if a general war occurs it means invasion of Mexican territory. The question naturally arises, What are the disease dangers which will confront American soldiers in Mexico? It has long since passed into a truism that in war, disease kills more than bullets. Will this prove true in a Mexican war? The increased knowledge of preventive medicine since the Spanish-American War has encour-

aged the belief that the mortality from disease will be materially lessened. To what extent is this belief justified, and what are the diseases from which our troops may suffer in a tropical country and from which they should be protected? These questions, which have probably been in the minds of many of our people during the last few weeks, are answered in a recent issue of *The Journal of the American Medical Association*.

Aside from the ordinary diseases which might prevail among any body of two of three hundred thousand men. there are certain diseases to which soldiers in camp and in the field are particularly exposed. These are especially small-pox, typhoid fever and dysentery. Small-pox may be disregarded, as any troops sent into Mexico will be immune from this disease through vaccination. Typhoid fever, in the past, has been the awful scourge of military camps. The appalling experience of the Spanish-American War has not been forgotten by our people; the record of twenty thousand cases of typhoid in the army in six months produced an impression which can never be obliterated. But since then progress in preventive medicine has been made, and vaccination against typhoid is a result. Antityphoid inoculation has been subject to rigorous tests on a large scale in the army during the past two years, with the result that in 1913, out of ninety thousand men at home and abroad, there was only a single case of typhoid fever among the inoculated, a record that can well be regarded as a triumph for preventive medicine. It is believed that the army surgeon now has a weapon against typhoid that will make the next war unique in this regard. Every officer and man now in the United States army and navy is practically safe against this disease, and each recruit will be inoculated at the time he is sworn into the service. The next campaign in which the United States army will participate will be a practical test of typhoid prophylaxis on a large scale. That it will prove the value of inoculation and will relieve warfare of one of its most horrible accompaniments there is little doubt.

The dysenteries can be divided into those due to bacterial invasion and those caused by ptomains in foods. While the water and food of the soldiers will be more carefully guarded than ever before, a certain amount of intestinal disorder will be mevitable. It can safely be predicted, however, that the nation will be spared a repetition of the "embalmed-beef" scandals of 1898. The work of the general staff of the army, the development of departmental officers of high efficiency and the enormous amount of publicity on pure food that has taken place in the last decade, ought to insure the American soldiers a wholesome foody-supply. After the experience and warning of the past, the American people will hold to a strict accountability any one responsible for supplying the army with food materials which are not in every way up to the standard.

Of the diseases peculiar to tropical and semicivilized countries, yellow fever, malaria, bubonic plague, cholera and typhus must be considered. The brilliant work of the last fifteen years in demonstrating the transmission of malaria and yellow fever by the mosquito has put our army and navy surgeons and sanitarians in possession of all the knowledge needed to control these diseases. The convincing demonstration of the practicability of their control given by General Gorgas in the Canal Zone has proved that malaria and vellow fever can be controlled completely in settled communi-Where men are living in fixed habitations, which can be screened and where all possible breeding-places of mosquitoes for a necessary distance can be destroyed, the complete eradication of these two diseases is possible. It remains to be seen, however, what methods can be developed for preventing mosquito infection among soldiers in the field. Mosquito-nets can, of course, be carried, and patients in the field and hospitals can be protected as well as troops in barracks or permanent quarters. But how about troops in the field, scouting parties, pickets and outposts? Undoubtedly American ingenuity will devise methods to meet the needs, and the dangers of these two diseases will be greatly diminished, although occasional cases may be unavoidable. Epidemics, however, will be practically impossible.

Cholera, being borne through water, milk, flies or human carriers, can be prevented only through cleanliness and by maintaining the purity of water-supplies. It is not today a particularly dangerous possibility, as it can enter Mexico only by way of the seaports, most of which, in case of a campaign, would soon be in the hands of the navy and under quarantine regulations. Regarding typhus fever, it is a strange coincidence that the work of Ricketts,

by which he demonstrated, at the loss of his own life, that the body-louse is the carrier of this disease, was done at Mexico City, where he went to carry on his investigations on account of the prevalence of typhus among the lowerclass Mexicans. This disease, which in past centuries caused enormous loss of life in camps and on shipboard, is limited in its danger and can easily be prevented by avoiding dirty dwellings and contact with dirty individuals. There is as yet no known method of prevention except the avoidance of infection. It is probable that among any large number of soldiers in Mexico, a few cases of this disease will develop.

Bubonic plague is endemic in many of the near-by South American ports. It would probably be a constant danger in the Mexican seaports. Fortunately, it would be confined largely to the seaports and large towns. An army in the field, living in tents on the bare ground, would be practically safe from it. Probably one of the first measures inaugurated by our medical officers on taking possession of a Mexican seaport would be a campaign of rat extermination, as this animal has been shown to be responsible for plague propagation.

THE HEALTH OF THE PEOPLE.

The campaign for the education of the American people along the lines of preventive medicine still goes on. The American Medical Association has just issued a series of ten pamphlets on Conservation of Vision, six more are in the printer's hands and two more are in preparation. In addition to this series five bulletins or pamphlets have been issued on public health topics.

The titles to the pamphlets already issued are as follows:—

School-Children's Eyes.

Industrial and Household Accidents to the Eye.

Wearing Glasses.

Trachoma in Eastern Kentucky.

Auto-Intoxication and the Eye.

Eye-Strain.

Lenses and Refraction.

The Eye and Its Functions.

Care of the Eyes.

Death and Blindness from Wood Alcohol Poisoning.

Child Culture the Function of Organized Medicine.

The Municipal Regulation of the

Milk Supply.

These pamphlets may be had by writing to the secretary of the Council on Health and Public Instruction of the American Medical Association, 535 North Dearborn Street, Chicago.

WE ARE OUR BROTHER'S KEEPER.

The knowledge that the criminal classes need to be defended against certain features of the penalty which society inflicts upon them for infractions of law is growing more and more in extent, as everyone realizes who has followed the efforts of prison reformers to enlist the sympathy of the public for their work. If added proof were needed, the indignation generally expressed when the warden of the Kansas State penitentiary promulgated the fact last week that one-third of the 817 convicts in the prison are suffering from tuberculosis contracted by working in the prison coal mine is sufficient evidence of a growing humanitarian movement to lighten the burdens of our fellowmen. Perhaps since the French Revolution, when our common brotherhood first began to be dimly understood, this generation is doing more to uplift and to redeem than any previous one. Pessimists may point to our reckless disregard of life and limb in our pursuit of wealth; they may show that business is only another form of war, and that "war is hell." to quote General Sherman; they may point to our intolerance in religion and politics. Despite these facts, humanity is doing more to ameliorate the condition of the delinquents, the poor and the halt and the blind than at any period of its history. While much may be due to the feeling that an emotional outlet must be found for the stress of our industrial strife, and that mankind is prone to treat effects and not causes. vet in the process of the suns this effort to help and to uplift will bring its fruition. Perhaps it will not be amiss to suggest that to the medical profession more credit should be due for this movement than is usually accorded to it. But the profession is accustomed to labor in humanity's behalf without much reward.—(Cincinnati Medical News.

THE DESTROYER OF CONFIDENCE.

"See no evil, hear no evil, speak no evil," so runs the Confucian proverb; to this should be added the appearance of evil. What a man thinks is written on his face, betrayed by his attitude and told by the eyes, the hands and the feet. Words are quite as often the instrument of concealing thought as of giving it clear expression. But it needs no gypsy to read the mind as it plays upon the muscles of expression through the emotions. A man may

speak fine sentences that he does not mean, but his looks belie his words. And so a man's reputation may suffer more from a shoulder shrug, a sarcastic smile or mere silence, than from a slanderous tongue. This is the secret of how some men destroy confidence in others by their mere presence, though they say not a word.

Then there is the man who by his acts puts you in an evil light. He enters the consultation room like a hero coming to the rescue, he leaves the impression that he arrived just in time to prevent some dire calamity; his acts speak louder than words, and as a destroyer of confidence are a thousand times more potent.

Another means of destroying confidence is by the "joke," "It was so funny," Dr. X's mistake. Presumably no harm was intended in the telling, but in the end Dr. X has been laughed at, and when you once have laughed at a man's failings he never commands the same respect that he did before. When the nurse and family are laughing at you your prestige will not last long. Men learned in dispute have long known the power of ridicule. "Ridicule shall frequently prevail and cut the knot where graver reasons fail."

And finally we have the man who openly attempts to destroy confidence by seeing, hearing and speaking evil constantly. He does no harm, but he works in the open and gives you a chance to defend yourself. The public comes to know him at his true value, and as a destroyer of confidence he does not compare with the man whose actions speak louder than words.

The fault of destroying confidence has been condoned by the assertion

that the medical profession is overcrowded and that competition is so strenuous that one must push his way by fair means or foul. But the argument will not suffice, for the attempt to put competitors in an evil light is quite as common where clients are many as where they rarely disturb the struggler's solitude.

And what is the net outcome of it all? Loss of individual and professional prestige, for if we do not respect each other whence shall come the respect of the public?

We are all more or less guilty and perchance the writer is among the chief of sinners, but nevertheless the destroying of confidence is a wicked business that is leading us into much trouble and vexation. It is a matter that should receive more attention at the hands of the County Medical Society.—(G. W., in Bulletin of El Paso County, Texas, Medical Society.)

WHAT'S THE USE?

There isn't a location in the United States where a doctor can make his living but there's a doctor already there. There isn't a town that can support a dentist, lawyer, carpenter, blacksmith or any other craftsman, but has two or more competing for the work. There isn't a hamlet, but has a school, unless it's too poor to support a teacher. There isn't a community that can support a church, but has three, two of which receive outside aid. There isn't any place for dry-goods, groceries, clothing, or any other business that isn't overdone. Look at the drugstores, and saloons, and clothes-cleaners, and tobacconists, and storagehouses; look at the unemployed laborers! There are too many men in every branch of man's labor. Better have a war and thin them out.

Women? Of course there are too many women. Take up any newspaper, and see how many items you can find where two or more women claim or want one man. Try to find employment for any woman that will yield her support, and see! Find a household that does not shelter at least one superfluous woman, one that doesn't give a home to "Aunt Hannah." Yes, there are, surely, too many women.

The State can't build jails to hold all its criminals, asylums enough for its insane, hospitals for its sick, almshouses for its poor, schools for its children.

Too many of everybody.

Brahmin and Buddhist went over this ground ages before the Galilean walked this earth, and they came to the conclusion that nothing was any use: that world and life in it were irretrieveably bad and the best thing that could happen to anybody was to get out of it. Pessimism was the weighty chain with which the Brahmin shackled Media, and Buddha added to its weight. Yes, Gautama, who, dying, gave as his parting message to man the words that can not die, "Be kind to all that lives," he also found no heaven promising so much as Nirvana-nothingness.

Yet, the rich earth yields its increase to the tiller, and the rain falls, the sun shines, the birds sing, the seasons roll round, and winter's snows are stored away to afford moisture to the swelling grain, and the growing crops gladden the eye with their promise of plen-

ty. The children shout, laugh, and arouse the somnolent elders with their tumult. Girls and youths who have labored the long day fill the evening hours with song or saunter off in couples.

Now take any human vocation—our own will do—and survey it by itself. Some men have success, some become eminent, some merely hold their own, some fail.

Wherein, then, lies the difference? In work, every time? The man who works hardest succeeds best. I don't mean mere hand-work, or routine work, but work with hands directed by brains; well-considered plans, energetically followed out. That combination is a sure winner.

I've known lots of pessimists. One had been a great merchant, but failed. He lost his nerve, and never tried again. He could spot the weak links in a chain every time and show just why the scheme would fail. Other men with less brain-power took the chances and made good.

One of the most accomplished physicians was incurably pessimistic. Patients respected him, but went to other doctors. He wouldn't venture an opinion or give them any encouragement. Less scrupulous men promised everything, and they generally won out. If they didn't, they left among the family the feeling that the doctor had made a good fight, anyhow—and men like a fighter. My pessimistic friend had the abilities of a DaCosta, but—I'm not sure whether he is alive yet or not—I never hear of him.

Some traveler described this scene: On a steamer there was a bench on which sat ten men, exactly filling every inch. A Turk came up, surveyed the seat, then turning his back he pushed his way to and onto the seat. At one end a man fell off. Then the Turk went on "scrouging" until another fell off; whereupon our Turk squatted squarely on the bench, cross-legged, and calmly began to smoke. Now, if that Turk had been a pessimist, he would have seen there was no room for him on the bench and stood up till somebody made place for him.

Mister Pessimist, you are the fellow who was crowded off that bench.

This is my treatment: I once sat down seriously to consider how I should have arranged this world had I been the creator. O, well, I should leave out sin, disease, and death; I should abolish greed, cruelty and selfishness. But I soon found that this scheme wouldn't work out. For, with every vice I destroyed I demolished also a virtue; for every difficulty removed, I took away an incentive to exertion. Life became monotonous. meaningless, unendurable — and the thought of this state going on endlessly became appalling. This glorious earth is planted full of the most enticing possibilities, waiting for somebody to discover and develop them.

We may not be Edisons or Madame Curies, but to each and every one of us comes the opportunity to do something worth while. But we can do it only by getting to work, never by sitting down and whining, "What's the use?"—(American Journal of Clinical Medicine.)

CROSS-EYES.

One of the most conspicuous and annoying conditions that may occur in the eyes of a young child is squint, or

what is commonly known as "crosseves." It occurs chiefly between the ages of 2 and 6 and comes on gradually at first, showing some slight turning inward in one eye, at times, until finally something occurs to precipitate a definite attack and the eye turns in to a greater or less degree and remains so. Frequently a convulsion or an attack of coughing, especially during whooping-cough or some like irritation to the general nervous system, brings on the attack, and is considered by the child's mother to be the cause. This is incorrect. When the eve is turned it will not look directly at the object at which the other eye is looking, and doubling of the vision is the result. This "doubled vision" is very annoying, as one may judge for himself by slightly pressing one eye out of position with the fingers In order to escape this annoyance the child unconsciously stops using the eye that is turned in, and this, in time, leads to changes in the nerve tissues which makes the child's sight defective in that eye. Formerly many physicians advised parents to wait until the child grew older before having anything done to the eye, feeling that an operation was the only thing to relieve the condition, or that the child might "outgrow it." This, in the light of our present knowledge, is bad advice. By the time the child gets to be 8 or 10 years old the sight in the eye is defective from disuse, and cannot be restored, and this failure of vision has usually occurred even though the eye has straightened itself spontaneously. It is very important, therefore, not to allow the child to stop using the squinting or turning eye. It is not always necessary to operate. Usually glasses

have to be worn to stop the strain, and there are other forms of treatment which are many times effective. If these means fail and the eye continues to turn, an operation may have to be done to keep the eye straight and to save the sight in that eye. But not more than half, perhaps even less, will require operation. Fortunately treatment is much more judiciously given and often is more successful now than it used to be, and the present generation of children will probably not show so frequently the defects caused by neglected "cross-eyes."

THE CAUSE AND CONTROL OF CANCER.

It is frequently said that we do not know the cause of cancer. In one sense this is true. What it is that starts the growth of cancer in the body is, as yet, an inscrutable mystery. Years of experimentation and research have not solved this riddle and the disease still remains the foremost problem of medicine.

On the other hand we know much more than is commonly supposed about the "causes" of cancer, if by "causes" we mean "conditioning factors." We know, in some cases almost to a certainty, the combinations of circumstances which result in this disease. A noted authority recently undertook to write a "prescription for cancer." He said that he could name certain states of the body, which, if they occurred together, would be likely to be followed by cancer; for instance, syphilitic subjects with bad teeth, who were confirmed smokers, might reasonably be expected to develop cancer of the tongue. Irritation for a long period in any part of the body may lead to the development o fcancer.

While we do not know just why cancer cells set up a growth of their own outside of the law and order of the human body, we can nevertheless describe a great number of conditions under which they have been observed to do so. The influence of racial, local and personal habits on different organs, heredity, the evidence and nature of constitutional predisposition, the influence of chronic infection of wounds and other injuries, and many other factors may be profitably studied in connection with the development of cancer. Incidentally, this is one of the ways in which cancer research hospitals are of value.

It is not necessary to know the ultimate cause of cancer in order to control the death rate from it. We can remedy many of the conditions under which the disease develops by increasing the knowledge as to the facts about cancer. Campaigns of education have as their object the spreading of information about the disease, and pointing out the need of the earliest possible recognition of the symptoms in order that competent medical and surgical advice may be sought in time. The American Society for the Control of Cancer has recently been formed to encourage and direct this kind of educational activity in all parts of the country. The society plans to cooperate with all existing agencies engaged in studying the disease, and to publish in every city, town and village of the country the message of hope which lies in the early recognition and proper treatment of cancer.

MENTAL HEALING AS A COMMERCIAL ASSET

We live in an age of wonders and of progress. The conditions of yesterday are lost sight of in the amazing progress of today. So great have been tile advances of scientific knowledge in the last fifty years that one is prepared for almost anything. Not only in the scientific world but in commercial matters as well is progress truly astenishing. Business enterprise today uses the worthless by-products and waste material of yesterday. The fact that the squeal of the pig is the only thing that goes to waste in the modern stockyards has long since passed into the realm of commonplace. Yet it remains for an accident insurance company to show systematically the financial value of the denial of human ills. The Preferred Accident Insurance Company of New York employs as an adjuster in Chicago a devotee of Christian Science. He is said to be a very valuable official on account of his ability to make the people insured in his company regard their injuries from a Christian Science point of view. Heretofore, the possibilities of a healer in any of the "mental science" cults have been restricted to "absent treatment" and "mental treatment," with the acceptance of such fees as the customs of the sect have prescribed. Thanks to the Prefered Accident Insurance Company of New York, a new and brilliant future is now open to the mental healer. He can be employed on a salary by accident insurance companies to onvince the policyholders that they are not really hurt and consequently have no claim against the company. But why limit such beneficent activities to insurance companies? asks The Jour-

nal of the American Medical Association. Why cannot each railroad and street car company have a medical healer in its employ who can hasten to the scene of the accident and convince the victims that the unfortunate event was only a delusion of their mortal mind, and that nothing has really occurred to them? Nor can the development of this new and brilliant method be limited to commercial and industrial conditions. Our government is standing on the brink of war with Mexico. Why send surgeons with the battleships, or ambulances with the army? A sufficient corps of mental healers, sent out on the battlefield after each engagement, will convince each wounded soldier that the bullet which struck him was only a delusion and that has really happened. Bandages, dressings, anesthetics, instruments, hospitals, sanitary precautions and regulations are all useless. If the teachings of the "mental healer" are to be accepted, we have only to convince ourselves that everything painful, dangerous or unpleasant to ourselves or others is non-existent, in order to become prosperous, individually and nationally.

Original Articles

REPORT OF A CONTAGION
AMONG THE CANON CITO
NAVAJO INDIANS

Dr. C. L. Day. Albuquerque, N. M.

(Read before the Bernalillo County Medical Society, March 18, 1914.)

Sometime early in January or the later part of December, an old Navajo woman, who had a reputation as a

traveler among the Pueblo Indians and Mexicans, as well as among the people of her own tribe, visited Mt. Taylor for the purpose of gathering pinon nuts. The second day of her stay on the mountain she was taken with a violent illness. The most prominent symptom was a sereve diarrhoea, which was attributed to eating corn meal mush and white bread; both the corn meal and the bread, ready baked, had been purchased from an Isleta Indian just before the trip. As the old woman's condition continued to become more serious, it was thought best to take her home, which was done. At her home, the usual Navajo hogan, a circular structure about ten feet in diameter, made of logs, stones, and adobe with an opening for entrance usually covered with a blanket or wagon sheet, and a hole in the roof to let out the smoke of a wood fire built on the ground, in the center of the room, this old woman's daughter acted as nurse.

As the disease progressed a very disagreeable odor was noticed, which seemed to fasten itself on the daughter's mind particularly.

The old woman died about the 15th of January and soon after the daughter was taken sick with symptoms similar to those of her mother but attributing her illness to the odor which came from her mother before death—this fact or fancy seemed to be upheld because of the vomited matter, which seemed to have the same peculiar odor. The young woman became progressively worse and developed into a semicomatose, delirious condition, so on January 30, I was sent for and saw her on the morning of January 31.

I found the patient to be a woman about forty years of age, lying on the

ground in a state of muttering delirium, with occasional slight convulsive movements of her whole body. Temperature 104; pulse, weak; about 130 at the wrist. The tongue was black, dry, and fissured. The teeth were covered with clotted blood, which I was told had been expectorated from time to time. The respiration was not rapid, as I remember, 22. The face had an anxious, livid look, but without any sign of eruption. I was very much surprised on examining the chest to find it covered with a peculiar dark eruption, which was very slightly raised and macular. In places there was a sort of mottled appearance to the skin. These spots were as numerous on the abdomen as on the chest but were more prominent under the pendulous mammae. There were a few moist-rales in the chest. The spleen showed enlargement on percussion.

The people reported the urine to be scanty and dark red. The bowel symptoms and the extreme prostration led me to diagnose this case as typhoid fever. My prognosis was very unfavorable. I instructed the Indians to be careful of fomites and perhaps unwisely, considering my diagnosis. I gave the patient two table-spoons of castor oil and instructed them to give the patient ten grains of utropine in solution every four hours or three times a day unless the urinary symptoms seemed to be disturbed by this medicine. This last was given with a faint idea that I might be dealing with a case of epidemic spinal meningitis. However, I left for home expecting that my patient was nearly through with life.

I heard nothing more from this settlement until March 2nd, when a letter from there informed me that my patient of the 31st of January had recovered but that there was an epidemic of this disease. That the sick woman's husband had died and that nine people were ill in various stages of the disease.

March 5th I visited the camp and found conditions as reported. After my calling their attention to the eruption on the previous case, the Indians had observed this symptom and were able to report that it never appeared on exposed portions of the body, such as the face, hands or feet, though it was sometimes on the legs and arms. The man who died had the most extensive eruptions of all and those who had prepared the body for the tomb reported no change in the eruption after death. All patients who had been sick more than five days had the eruption at that time, except those who had recovered. One woman who had recently passed the crisis showed traces of the rash under her mammae.

The fever seemed to fall by crisis, usually on the 17th to 20th day. Its invasion was abrupt. The crisis was followed by more or less desquamation, particularly on the plantar and palmar surfaces. Children ran a shorter and milder course than adults but exhibited the same eruption, even nursing infants. All cases were accompanied with more or less delirium and extreme hyperaesthesia of the skin. There have been twenty-four cases in the settlement, all in related families, of which thirteen have recovered, three have died and eight are now sick. The last death was a child five years of age in which the disease was complicated with whooping cough. I did not have facilities for bacteriological or blood

examination and specimens of the urine could not be secured.

I have excluded my first diagnosis of typhoid fever by history of abrupt invasion, ending the fever by crisis. Rash differing from the rose spots and appearing in all cases at times on the extremities. Also the appearance of the rash is earlier than in typhoid. From cerebro spinal meningitis by the eruption being more uniform. Absence of Kernig's sign, which I failed to find in any cases. Milder attacks among children and a quicker convalescence. However, I do believe if there is any question of my diagnosis this disease would be the most probable.

Measles would be excluded by the rash first appearing on the chest and abdomen and never on the face. Absence of Koplick's spots, which I failed to find; also the bowel symptoms were more prominent than respiratory.

Rocky mountain fever is similar except that the rash first appears on the wrist, in this disease, also appears on the forehead and lastly on the abdomen. This disease is seldom seen except in the Bitter Root Valley.

Scarlet fever has a far different eruption, and is more severe in children than in adults. Also sore throat is a prominent symptom.

This seems to be too severe a disease to be diagnosed as German measles. The rash of rubeola appears on the face.

My diagnosis is typhus fever. Anders says the eruption appears from the third to the fifth day without a decline in temperature, which I noted in all my cases.

The nervous symptoms were also quite characteristically described by the same author, who mentions the crisis, the vomited blood, the peculiar odor which is likened to the smell of the urine of mice.

Furthermore, the studies of Rickett and others, have shown that this disease is transmitted by the louse. These people have plenty of vermin. It is believed to be endemic in Old Mexico, perhaps the first case became infected from a Mexican camp along the railroad.

I claim to have done little, if anything, toward curing this disease. Those who have recovered have done so because of its self-limiting character. I am trying to stop its spread. We now have twenty-seven people under strict quarantine with a guard to watch. The whole settlement is being closely guarded by our Indian Police and any places outside of quarantine, where sickness may break out will be looked after and reported to me. campaign against the louse has been started. Twenty-five gallons of coal oil was shipped today for this purpose, to be mixed with lard and oil and applied where needed, but we may have been too slow.

March 8th one of the Indians now sick with this disease, stayed in a suburb of Albuquerque. His coming here was against our instructions and before we had authority from Washington to have an extra guard; he came for food for those sick but I trust he did not leave any infection behind him.

The only observations which I thus far made that are not uniformly recorded in the various text-books on typhus fever are that the eruption has not appeared on exposed portions of the body in my cases. Hughs and Anders are the only ones I have found mentioning this.

I have not been able to find any mention of typhus fever being milder with children than with adults, as has been my observation in uncomplicated cases.

Considering the number exposed I do not think the spread of infection has been rapid. Of course, this depends on the vermin.

TREATMENT OF PYOSALPINX.

W. R. LOVELACE, M. D., Albuquerque, N. M.

(Reod before the 32nd Annual Meeting of the New Mexico Medical Society, Albuquerque, New Mexico, Oct. 2nd-4th, 1913.)

An intelligent and satisfactory treatment of pyosalpinx demands a knowledge of the etiological factors and pathological processes which produce this condition.

In an analysis of reports of many thousands of pathologic examinations of tubal contents it has been proven that $62\frac{1}{2}$ per cent are due to gonorrhoea, 16 per cent to incomplete abortion and the remaining $21\frac{1}{2}$ per cent being of uncertain origin but probably due to the entrance into the tubes of other pathogenic organisms from other parts of the body.

The tubes vary from a cylindrical mass about the thickness of the little finger to a large fluctuating tumor four or five cm. in diameter and twice its normal length. The epithelial lining of the tubes in chronic cases is destroyed and ordinary granulation tissue takes its place.

That the acute cases of pyosalpinx are due to an ascending pyogenic process, or to an ascending infection seems without doubt. In the early cases we

have an acute salpingitis from which there is almost immediate extension of infection through the fimbriated extremity to the pelvic peritoneum, or in some instances to the pelvic cellular tissue. Nature then makes a strong effort to limit the infected processes by forming a retarding wall of peritoneal adhesions. Frequently this is accomplished by sealing of the fimbrae, or again by adhesions of the fimbrae to peritoneum, colon, ovary or uterus, the position of the infected tube determining the method of closure. It is unfortunate that in acute pyosalpinx we cannot, as in appendicitis, make an early diagnosis.

Cases do not usually present themselves until pelvic peritonitis is already well advanced, because as a rule it is not until we have a pelvic peritonitis that we have decisive symptoms. Therefore in the treatment of acute pyosalpinx we must always bear in mind that there is present a peritonitis and if nature is left to herself the tubal infection will be promptly and effectually walled off; and that so far as the immediate safety of our patient is concerned we have only a localized peritonitis to combat.

An operation upon an infected or an acute pyosalpinx with peritonitis present—and peritonitis is always present when there are enough symptoms to justify operation—means an almost certain dissemination of infection throughout the patient which lessens her chances for life by at least 20 per cent. Too much stress cannot be laid on the fact that the treatment of acute cases is non-operative. Nature should be assisted and every effort made to carry the case through to a mild or chronic stage, when operation may be

performed with a minimum amount of danger and a greater certainty of perfect cure.

The treatment of acute pyosalpinx, is the treatment of the accompanying peritonitis, namely, hot turpentine stupes, or ice coil to the abdomen. Fowler's position and saline solution per rectum, by Murphy's method of proctoclysis. In these pelvic cases I have gotten good results from hot antiseptic douches and boro-glycerid tampons in combination with ichthyol.

The treatment of chronic pyosalpinx is surgical, requiring attention as soon as possible. In doing a salpengectomy you may select either the vaginal or abdominal route. I prefer the abdominal route in all but very select cases; this gives you a better opportunity for making a thorough examination of the pelvic region and is easier done. Operating for pyosalpinx is in a large measure a question of dealing with adhesions to pelvic wall, omentum, bowel, bladder and rectum, and in this work the eye as well as the hand should be utilized.

Many times adhesions are found so dense as to be impossible of separation by the finger. It is in such cases, when working in the dark through the vagina that serious and oftentimes fatal rupture of the bowels occurs. When, however, the uterus and adnexa are freely movable, when it is certain that the uterus can be turned down through an anterior vaginal incision, and when there is a certainty the adhesions are fine and of small movement, then the vaginal operation may be adopted.

Care in removing tubes without rupture is an important factor. "To rapidly pack off the pelvis, to quickly dig out an adherent tube, regardless of rupture; to depend upon the packs and upon dry sponging and upon the absorbing power of peritoneum to care for the spilled pus may offer a fine operative gallery play, but often makes work for the undertaker."

It is certain that if a septic tube is removed without rupture, if no pus is spilled, if bowel or bladder be not torn, the patient has a maximum chance for recovery. It is true in a majority of chronic tubes the pus is sterile, and may be spilled upon peritoneum with impunity.

But how can we tell absolutely at the time of operation whether a tube is sterile or infective? It is certainly best to regard every pus tube as dangerous, and in removing it exercise every care to avoid rupture.

The question of drainage of the pelvis after operation for pyosalpinx has received wide discussion. Many good operators advocate drainage, and many others equally as good bitterly oppose it. We should not go to either extreme. There is a sane middle ground from which we may decide for or against drainage according to the needs of the individual case.

If infected pus has been spilled, or if infection is spreading, no great reliance can be placed upon any form of drainage, gauze, glass rubber or ciagrette, to carry away the infection. It seems doubtful whether drainage has more than a purely local action, certainly not after twenty-four hours since there is almost immediate walling off of the drain and drainage tract by adhesive walls.

In doing a salpingectomy, a median incision is made, relieving all adhesions by a blunt instrument or finger. A thorough exploration of the pelvis is

made, then the patient is put in the Trendelenberg position, tube located and brought as near the opening as possible without making too great a tension on surrounding tissue. After the adhesions are relieved the mesasalpinx is held by forceps and the tube is dissected from the broad ligament, the isthmus portion of the tube is removed from the uterus by a V shape incision, the remaining portion of the tube is thoroughly cauterized.

All bleeding points are carefully ligated and the bed of the tube is covered with peritoneum and sutured with a continuous catgut suture. In case there should be considerable oozing I have gotten good results by leaving about 500 cc. of normal saline solution in abdominal cavity.

SURGERY UNDER DIFFICULTIES.

J. G. Holmes, M. D., ... Alamogordo, N. M.

A physician is sometimes confronted with a very serious case which apparently is beyond hope of recovery but which surprises him and others by showing unusual vitality and taking another lease on life. I wish to present such a case.

The patient to whom I refer, A——M——, was a Mexican boy aged about 17 years. He was of the poorer class. His father had died about six months previously from tuberculosis. His mother was in poor health. They lived in a two roomed adobe which had no screens at the doors or windows.

On July 19, 1912, I was called late one evening to see the boy who said he had been sick about ten days with

pains in his stomach. Examination showed his temperature to be 100, pulse 80, and his abdomen rigid with a small tumor mass in the right inguinal region. I diagnosed the case as possible appendicitis with pus formation. Bismuth was prescribed and on seeing him the next day he was much better. Pulse 76, temperature normal, and the abdomen soft and the tumor gone. His bowels had moved freely. I doubted my previous diagnosis. However early the next morning he was a very sick boy. Every symptom of peritonitis from a ruptured pus cavity was present. Dr. Gilbert was called immediately in consultation and it was decided that an operation was the only thing that might save him. This was done early in the afternoon of the same day. His condition at this time was desperate. Pulse 130, temperature 104, respirations 40, with the abdomen greatly distended and rigid. Vomiting was constant.

The operation consisted of incisions about three inches in length on either side of the lower abdomen. flowed from both openings. Drainage tubes were inserted and because of the patient's desperate condition nothing more was done and he was returned to bed and placed in the Fowler position. Constant irrigation of the abdomen with sterile water was kept up for six days by the aid of the drainage tubes. After the second day water drained into the intestine and caused his bowels to move very frequently. This ceased when the irrigation was stopped. fecal fistula formed on the right side which gave considerable trouble for about three weeks. Pus pockets were formed all through the abdomen which would discharge at intervals.

No attempts were made to close the abdominal walls because of the need of free drainage. At the end of a month the patient was out of danger and in two months was able to walk. No distinct hernia followed the operation, though about six months after an abdominal belt was necessary because of the weakened walls.

About fifteen months after the first operation an abscess formed in the right inguinal region which pointed and discharged below Poupart's ligament and in the right gluteal region burrowing over the crest of the ileum. An operation was performed on Feb. 2, 1914, for the purpose of better drainage. The abscess healed readily and the patient has had no further trouble.

Seldom does such a desperate case recover even under the best surroundings. This patient could not afford a trained nurse. Surgical cleanliness was difficult. Being summer time the flies were a great menace. But while everything was apparently against the patient, due credit is to be given the relatives for their faithfulness and their efforts to follow instructions. The patient is now able to work and suffers no inconvenience except the lax abdominal walls.

THE BACILLUS BULGARICUS IN DIPHTHERIA—CLINI-CAL REPORT.

Dr. G. Werley, El Paso, Texas.

My experience includes four cases. Case 1 was an American child aged 8 years. A thick, continuous, creamy membrane covered both tonsils and extended to the uvula. Klebs-Loeffler bacilli were found by Dr. W. W.

Waite. On account of a brother of this child having had a very severe urticaria and dyspnoea following a second dose of antitoxin, I hesitated to inject this case with serum. Having read the experiments of Nicholson and Hogan (Journal A. M. A. Feb. 14, 1914) with the lactic acid bacillus and sour milk as a means of clearing the throat of the diphtheria bacillus, I determined to give this child large doses of calomel and local treatment with the bacillus Bulgaricus. I accordingly inoculated a quart of fresh milk with Hynson & Westcott's tablets of the bacillus Bulgaricus and as soon as the milk was sour used this as a gargle, in the mean time using the tablets themselves every two hours. At the end of five days all membrane had disappeared. It was noticeable that the child was in excellent condition at the end of the treatment, and did not have glandular enlargement, anemia or neuritis as I have heretofore noted when attempting to treat diphtheria without antifoxin. Since this I have treated three Mexican children for diphtheria with calomel and the bacillus Bulgaricus in milk as a gargle and they have all recovered completely and promptly as did case 1, above reported. Of course antitoxin in conjunction with this treatment would give still better results.

Abstracts

The Phenolsulphonephthalein Test.

F. B. Block, Philadelphia (Journal A. M. A., April 25), says that the phenolsul-phonephthalein test is now recognized as superior to any other test for kidney func-

tion and can be relied upon when the other laboratory tests might fall. He reports a case illustrating the fact. He also reports the results of the use of the test in about twenty cases admitted to the gynecologic ward of the University Hospital which had been sent in as good surgical risks and offers the following conclusions: though this series is entirely too small to serve as a basis for any definite conclusions, nevertheless, as far as it has gone it seems to indicate the following: 1. The effect of ether anesthesia on healthy kidneys is practically nil so far as reducing the excretory power of these organs is concerned. 2. Traces of albumin in the urine before operation should not give much concern, but clouds of albumin accompanied by casts should be considered seriously before the performance of elective operations. 3. The duration of anesthesia in any given case does not in itself signify the amount of injury which the kidnevs will sustain. 4. The position of the patient on the table, the character of the operation and the administration of protoclysis have not shown any effect of the percentage of phenolsulphonephthalein excretion after as compared with that before operation. 5. In one-third of the cases there is an increased excretion after operation."

Inflammation of the Gall-Bladder.

The importance and time of surgery in inflammation of the gall-bladder is emphasized by J. Tyson, Philadelphia (Journal A. M. A., April 25), who reports three cases of cancer following this condition. The fulminating form often terminates in abscess and if unrecognized may terminate in perforation. Next to the typhoid bacillus the colon bacillus is a frequent cause. A result appreciated only recently is adhesions now recognized as a frequent cause

of pain in the right upper abdominal quadrant, formerly unrecognized. Other predisposing causes are: sedentary habits, lack of exercise, tight lacing, childbearing and abdominal tumors, which contribute to explain the four times greater frequency of the condition in women. The most important consequence on account of its frequency is gall-stones, and the relation of these to cancer is now recognized; hence the necessity of prompt operation. Other results of neglected cholelithiasis are hardly less serious, such as abscess of liver and biliary fistulas into various organs, including the veins, the intestine, the stomach, the bronchi and the external integument. Atrophy of the gall-bladder is not infre-Tyson believes that in doubtful cases exploratory operation is sometimes justified, the more so since other conditions may be discovered which would also require operative relief. He does not deny that cancer may precede gall-bladder inflammation, but there is as much reason to believe that they were consequences in the cases reported.

Dysmenorrhea.

Clelia Duel Mosher, Stanford University, Cal. (Journal A. M. A., April 25), says that menstruation should be studied just as are the other functions and when normal should cause no pain or disability. functional dysmenorrhea observed is, she says, congestive in type and produced by: (1) the upright position (Moscati); (2) alteration of the normal type of respiration by disuse of the diaphragm and of the abdominal muscles; (3) the lack of general muscular development; (4) inactivity during the menstrual period; (5) psychic influences. Each of these causes is discussed. She shows how the upright position with the valveless vena cava causes uterine congestion which tends to become exaggerated when the abdominal muscles are lax, when costal breathing is employed and by clothing, etc., which interferes with the action of the respiratory muscles. Mosher has corrected these conditions in many cases by the following method: "All tight clothing having been removed, the woman is placed on her back, on a level surface, in the horizontal position. The knees are flexed and the arms placed at the sides to secure relaxation of the abdominal muscles. One hand is allowed to rest on the abdominal wall without exerting any pressure to serve as an indicator of the amount of movement. The woman is then directed to see how high she can raise the hand by lifting the abdominal wall; then to see how far the hand will be lowered by the voluntary contraction of the abdominal muscles, the importance of the contraction being especially emphasized. This exercise is repeated ten times, night and morning, in a well-ventilated room, preferably while she is still in bed in her night-clothing. She is cautioned to avoid jerky movements and to strive for a smooth, rythmical raising and lowering of the abdominal wall." The results have been that the pain has been lessened in many cases and wholly removed in a large number. The desirability of more activity is noticed in one of the cases reported; but she cautions against excess, especially in the athletics of college training. A hopeful mental condition is important, and it is unfortunate that pain or disability is so commonly expected. The defination of menstruation should be restated more accurately as Nature's effort to relieve the undue congestion of the uterus by the causes above mentioned. Mosher's opinion does not represent a supplemental wave of nutrition (Jacobi) but rather a waste of potential energy in the form of blood which might be used in productive work when not required for the development of the embryo. Under normal conditions there should be no more women suffering from disorders of the generative organs than from disturbances of digestion, respiration or of the heart. At present, she says, all the evidence points to the menstrual hemorrhage as a secondary matter more or less fixed by the upright position, and it is unnecessary that it should be of long duration or large in amount.

Renal Diabetes.

S. Strouse and A. H. Beifeld, Chicago (Journal A. M. A., April 25), discuss the so-called renal diabetes, possibly traumatic in origin. The general conception that the kidney is practically passive in diabetes has been disputed and they notice the various statements of authors in regard to this matter. Richter, von Noorden and Weiland have pointed out that the development of albuminuria may be accompanied with decreased excretion of sugar and, they say, it must be assumed that a relation may exist between glycosuria and the kidney, independent of true metabolic disturbance. The term "renal diabetes" seems to be employed for a condition of glycosuria which has been associated with kidney disease and clinically differentiated from true diabetes by its independence of carbohydrate intake and its clinical course. In studying the cases in the literature one is struck with the many temporary derangements included under this head, and many of the cases cannot be taken as showing the existence of a separate disease. It has been shown, nevertheless, by Salomon that there exists a group of glycosurias even in youth that do not progress to diabetes mellitus. Lepine and Garrod have proposed that the term "renal diabetes" be dropped and the phrase of "glycosuria without hyperglycemia" adopted in

its stead. Many temporary derangements are classed as renal diabetes at present, and unless we restrict them to the condition defined in Lepine's and Garrod's definition we are not justified in recognizing a separate disease. Strouse and Beifeld go over the literature of the more thoroughly reported cases and give a full report of one of their own of a healthy young man in whose urine glucose was accidentally discovered during a life-insurance examination. About a year before he had had an injury to his head, but the connection of this to the condition is not clear. There were no symptoms of diabetes mellitus. The blood-sugar was normal and the excretion of dextrose was practically independent of the carbo-hydrate intake. Under conditions that would intensify the symptoms of true diabetes in a person of his age, 23, he continues in perfect health. The clinical course has not been at all like that of diabetes mellitus, but fully satisfies the diagnosis of renal diabetes or glycosuria without hyperglycemia. Tables of complete urinary analyses under various diets, including carbohydrates and excluding carbohydrates, are appended.

Gall-Stones.

After mentioning the difficulties of detecting gall-stones with the Roentgen ray, G. E. Pfahler, Philadelphia (Journal A. M. A., April 25), describes the technic employed by him to meet them and sums up his paper in the following: "1. Gall-stones can be shown only when they are composed of a substance of greater or less density than the surrounding tissues. This will usually mean that they must contain some lime-salts, though this quantity may be small. 2. My records show positive findings in 74 per cent, but I believe in general one can not count on more than

50 per cent being demonstrable. I believe that a negative diagnosis at present has no value. 3. It is possible that with the improved technic, when we find the gallbladder small, and still find no stone, it may become of some value in negative diagnosis. 4. The estimation of the value of this method of diagnosis must be based only on the work of roentgenologists who have mastered a good technic, and who are thorough in their work. 6. Definite information will be obtained only by continued .cooperation of the surgeon and the roentgenologist. 6. In the future I believe that we shall obtain valuable information concerning the liver and spleen by the roentgen method described."

Plantar Warts.

R. L. Sutton, Kansas City, Mo. (Journal A. M. A., April 25), says that while the subject of plantar warts has been carefully studied by several authors within recent years, the true nature of the condition is seldom recognized even today. For this reason he reports a case which is the most extensive he has ever seen and which he has studied microscopically. These cases are notoriously resistant to treatment, and recurrence frequently takes place after excision. Of all the methods tried he gives first place to Puscy's carbon dioxid snow, fulfuration second, and Roentgen treatment third. Before the snow or electric current is applied, the epidermal lids of the little tumors should be removed by a 10 per cent salicylic plaster. Roentgen treatment is especially applicable when there are numerous lesions, which frequently disappear as if by magic. In the case reported all three methods were used and the cure was apparently complete in three weeks.

Collargol Injections.

During the pase few years the question as to the dangers of the Voelcker method of injecting collargol into the pelvis of the kidney has been much discussed and the fatalities that have occurred have excited considerable attention. D. N. Eisendrath, Chicago (Journal A. M. A., May 2), reports certain experiments by himself and E. W. Schnoor on dogs in which the conditions found in human beings have been closely imitated. In the two experiments reported, solutions of collargol were injected in dogs under high pressure. Death followed in one case in five minutes and in the other in thirty. Extensive and widely distributed collargol embolisms were found in the lungs; liver, spleen, gastric mucosa and kidneys. They believe that these experiments offer for the first time a logical explanation of the deaths in human beings. Full discussion of the subject is postponed until the complete report is made at the June meeting of the American Medical Association. The article is illustrated.

Argyrism from Collargol.

A. M. Crispin, New York (Journal A. M. A., May 2), reports a case of a young woman supposedly suffering from jaundice which truned out to be a case of argyrism following a course of collargol. A dose of 10 grains of hexamethylenamin given for a coryza caused a marked improvement in the patient's coloration and she was delighted with the result. The suggestion is made that if there is found another unfortunate person with dark bluish color from argyrism, hexamethylenamin might be tried. Operation for other symptoms revealed a chronic appendicitis.

The Treatment of Infected Wounds.

Thomas J. Watkins, Chicago (Journal A. M. A., May 2, 1914), points out that pus in

wounds is a result, not a cause, and that recovery comes not because the pus disappears but because the bacteria are destroyed. He says that no wounds should become infected except when operation is performed during acute infections. manipulation of the wound is avoided. No probing, packing or irrigation is used. He employs the following treatment: An infected abdominal wound is covered with a hot, moist, non-irritating gauze dressing, which is kept moist with boric acid or normal salt solution and is covered by some non-porous protective material to prevent evaporation. Heat is supplied by means of a hot-water bag. The dressing is frequently changed and treatment is continued until the wound assumes a healthy appearance. If separated, the edges of the wound are then drawn together with sterile adhesive plaster and a dry dressing applied. The moisture favors drainage by preventing the discharge from coagulating. The advantages, he asserts, are that the disturbance of the patients is slight; the wound is quickly repaired; strength of wound is unimpaired through absence of sloughing and danger of secondary contamination is minimized. The author has used this treatment successfully since 1907.

Quinin Poisoning.

Elizabeth C. Underhill, South Hadley, Mass. (Journal A. M. A., May 2), gives an account of a girl student, aged 20, who took with apparently suicidal intent the whole contents of a bottle of 100 2-grain quinin pills. There was a short stuporous period, with vomiting, followed by a short period of delirium, after which she became perfectly rational. The ordinary symptoms of tinnitus and fulness in the head were experienced but were not excessive. In a few hours, however, sight was lost

completely and the pupils were widely dilated. Under treatment with evacuants, bromids and morphin to produce sleep, etc., she began to improve and gradual improvement continued until recovery seemed complete. It is possible that some of the pills passed, or were ejected by vomiting. The case is reported on account of the amount taken.

New and Nonofficial Remedies.

Since publication of New and Nonofficial Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies:"

Scarlatina Strepto-Serobacterin, Mulford (Immunizing).—A sensitized scarlatina streptococcic vaccine, sold in packages containing three doses of killed sensitized streptococci. (The Council has at present no means for determining the identity and purity of serobacterins and these must therefore be used on the guarantee of the manufacturer, alone) (Jour. A. M. A., April 11, 1914, p. 1168).

Phenolphthalein-Agar.—Phepolphthaleinagar is agar-agar impregnated with phenolphthalein, 100 Gm. containing 3 Gm. of phenolphthalein. It has the properties of agar-agar augmented by those of phenolphthalein. The Reinschild Chemical Co., New York (Jour. A. M. A., April 11, 1914, p. 1168).

Causticks (Silver Nitrate 75 per cent).— Wooden sticks 1½ inches long, tipped with a mixture of silver nitrate 75 per cent and potassium nitrate 25 per cent. Each stick is to be used but once. Antiseptic Supply Co., of New York.

Caustick Applicators (Silver Nitrate 75 per cent).—Wooden sticks 6 ½ inches long, tipped with a mixture of silver nitrate 75

per cent and potassium nitrate 25 per cent. Each stick is to be use Jut once. Antiseptic Supply Co., New York.

Cupristicks (Copper Sulphate 60 per cent).—Wooden sticks $1\frac{1}{2}$ inches long, tipped with a mixture of copper sulphate 60 per cent, alum 25 per cent and potassium nitrate 15 per cent. Each stick is to be used but once. Antiseptic Supply Co., New York.

Stypsticks (Alum 75 per cent).—Wooden sticks 1½ inches long, tipped with a mixture of alum 75 per cent and potassium nitrate 25 per cent. Ech stick is to be used but once. Antiseptic Supply Co., New York (Jour. A. M. A., April 25, p. 1328).

Propaganda for Reform.

Theobromin Sodium Salycilate Versus "Diuretin'.'-Theobromin sodium salicylate, now described in New and Nonofficial Remedies and sold by most pharmaceutical firms, was first introduced under the therapeutically suggestive name "Diuretin." While under its proper title it can be bought for 35 to 45 cents an ounce, the proprietary "Diuretin" costs \$1.75 ounce. An examination in the A. M. A. Chemical Laboratory has demonstrated that the quality of the product as sold under its chemical name is equal to that sold as "Diuretin." In view of these findings physicians should learn to prescribe the drug by its chemical name (Jour. A. M. A., April 4, 1914, p. 1108).

Tonsiline. — Newspaper advertisements assert that Tonsiline is "A quick, safe, soothing, healing antiseptic cure for sore throat." From an analysis made in the A. M. A. Chemical Laboratory it appears that a preparation like Tonsiline will be obtained by mixing one ounce of tincture of ferric chlorid, one ounce alcohol, 280 grains potassium chlorate with sufficient water to make one pint. It contains drugs

whose use for the purpose for which Tonsiline is used are being abandoned. The objection to the indiscriminate use of Tonsiline, which represents a saturated solution of potassium chlorate, is evident. (Jour. A. M. A., April 4, 1914, p. 1109.)

Gomenol.—Gomenol is a volatile oil, which comes as a proprietary from France. The oil appears to be prepared from a plant closely related to that which yields oil of cajaput and the properties and therapeutic value of the two oils probably are about the same. Gomenol is sold under most extravagant claims (Jour. A. M. A., April 4, 1914, p. 1110).

The Value of Mineral Waters.—The unprejudiced physician who is seeking to avail himself of the best therapeutic aids which modern medical science affords, cannot help being baffled by the conflicting claims made by the crude balneotherapy of today. He sees numerous cases in which relief has unquestionably been obtained by patients who have visited one of the many springs in this country or Europe; but when he attempts to analyze the possibilities-including rest, change of diet and environment-and to determine some standard by which he may intelligently advise those who need his help, the result is a hopeless confusion of ridiculous claims. At present mineral water therapy is a hopeless confusion (Jour. A. M. A., April 4, 1914, p. 1097).

The Serum Treatment of Tetanus.—
The great value of anti-tetanus serum as a preventive is unquestioned. As a specific cure the serum has fallen short of expectation; nevertheless, it has decreased the mortality from tetanus. Tetanus anti-toxin acts only on the toxin not yet combined with the nerve cells. This emphasizes the early and liberal use of antitoxic serum largely by intraspinal introduction in order to neutralize the toxin that still is

free and on its way to the nerve-cells, the necessity of thorough cleansing of the wound to remove all source of continued intoxication, and of conserving the strength of the patient in the hope that the morbid process caused by the toxin already in the nerve-cells may be overcome (Jour. A. M. A., April 11, 1914, p. 1174).

Salvarsan Therapy. — Wechselmann holds that the cases of salvarsan fatalities from encephalitis hemorrhagica were due to uremia, resulting from the irritation of the kidneys, in most cases damaged by administration of mercury. On the basis of this theory he argues for a pure salvarsan therapy in place of the generally combined mercury and arsenic treatment. He warns that salvarsan should be administered only after due consideration of the dose indicated and of the determination of absence of contraindications. No one can dispute that nearly all the deaths from salvarsan have been caused by its indiscriminate use, either in the face of contraindications or too large or too frequent dosage (Jour. A. M. A., April 11, 1914, p. 1175).

Wine of Cardui.-Wine of Cardui has vogue among women who prefer to take their booze in the form of "patent medicines." It is sold by the Chattanooga Medicine Company. John A. Patten, reputed to be the chief owner, is prominent in the Methodist Episcopal Church organization. Wine of Cardui is advertised as a cure for all manner of female diseases and though containing 20 per cent of alcohol, women and girls are advised to use it indiscriminately. Examination in the A. M. A. Chemical Laboratory makes it probable that Wine of Cardui is a hydro-alcoholic extract of blessed thistle, containing a trace of valerian and that its medicinal properties are due principally to its alcoholic content-20.36 per cent absolute alcohol by volume having been found (Jour. A. M. A., April 11, 1914, p. 1186).

Urodonal, A French Proprietary.-Urodonal, which has been widely exploited in France, is said to contain lysidin, sidonal and hexamethylenamin along with other things and to have a uric acid solvent power thirty-seven times greater than that of lithia. As Urodonal is not to be found in New and Nonofficial Remedies, as the uric acid solvent powers of the three chief constituents are generally considered to be slight and as the solvent powers of lithium salts for uric acid are admitted to be practically nil, the extravagant claims for the new shot-gun proprietary do not inspire confidence (Jour. Mo. State Med. Assn., April, 1914).

Hyperol.—Hyperol is exploited by the Purdue Frederick Company as "A Utero-Ovarian Corrective and Tonic" and is asserted to be "Indicated in all functional diseases of women." It is claimed to contain hydrastin, aloin, iron salts, apiol and ergotin. A report of the Council on Pharmacy and Chemistry announces that Hyperol conflicts with the following rules of the Council: Rule 4, in that statements on the label and in the circular enclosed with the trade package advertise it to the public in the treatment of diseases; Rule 6, in that exaggerated and unwarranted claims are made for its therapeutic qualities; Rule 8, in that the name of this pharmaceutical mixture fails to disclose the potent constituents, and rule 10, in that it is unscientific. The mixture is as unscientific as it is unnecessary. It cannot be adapted to any individual case; when ergot is indicated, apiol would naturally be contra-indicated; if aloes is appropriate, hydrastis may defeat the object sought. It is unnecessary because no intelligent physician would prescribe such a combination of drugs to be given in any case (Jour. A. M. A., April 18, 1914, p. 1271).

Friedmann Vaccine.—Referring to the exploitation of Friedmann's vaccine by exmayor Rose of Milwaukee, the Southern Medical Journal suggests that "Mr. Rose will be remembered by Alabama physicians as the apostle from the city made famous by certain brews of beer who a few years ago came into our state to instruct from the public platform our people regarding the health-giving properties of alcoholic beverages. He is probably prompted by the same philanthropic impulses when he attempts to inform physicians and the public of the 'miraculous results' of the serum that made Friedmann famous as well as rich." (Jour. A. M. A., April 18, 1914, p. 1272).

Friedmann and the Newspapers.—The officers of the Society of German Sanatorium Physicians protest against New York newspaper accounts which make it appear that their society had feasted Friedmann and endorsed his cure. Those who, incidental to a meeting of the society, inspected the Friedmann Institute were of the opinion that the cases under observation had been badly observed and as a whole could not be considered as successes or cures (Jour. A. M. A., April 18, 1914, p. 1273).

Pearl La Sage Complexion Treatment.—
Pearl La Sage, Chicago, sells a beauty treatment by mail which is claimed "heals, soothes, cleanses, softens and beautifies the skin" and removes all kinds of blemishes. The treatment consists of tablets, capsules and laxative pills. The contents of the capsules and the tablets are to be dissolved in water and splashed on the face, one at night and the other in the morning. Examination in the A. M. A. Chemical Laboratory showed the capsules and the tablets to contain as essential con-

stituents, phenolphthalein, borax and sodium carbonate. The pills appeared to contain cascara or some similar drug and a little alkaloid, probably strychnine (Jour. A. M. A., April 25, 1914, p. 1345).

The Hypophosphite Fallacy.—The hypophosphites were introduced by Dr. Churchill as a specific remedy for consumption on the theory, since proven incorrect, that phthisis was due to a lack of oxygen in the tissues. On the supposition that hypophosphites were exidized in the body, he presumed them to be a source of energy for the nervous system. Not only does the evidence indicate that in consumption there is an increase of oxidation, but there is no evidence that phosphorus acts as an energizer of oxidation and further, there is no proof that the hypophosphites enter into general metabolism. Not only is there no evidence of the utility of hypophosphites but it has long ago been demonstrated that they are excreted unchanged. While the discredited hypophosphite theory is no longer contained in text-books, the fallacy is kept alive by proprietary interests, and physicians who depend for their therapeutics on the "literature" of proprietary concerns, still employ the hypophosphites. (Jour. A. M. A., April 25, 1914, p. 1346).

Duket's Consumption Cure.—The backers of the Chicago exploitation of the Duket consumption "cure" now admit that the treatment is without merit, that it is vastly inferior to approved systems of treatment of pulmonary tuberculosis and that the treatment may lead to albuminuria. While the "cure" was given wide publicity through the newspapers, the public has not been informed of the unfavorable findings. (Jour. A. M. A., April 25, 1914, p. 1347).

Radioactive Waters.—Waters whose radioactivity is due, not to radium itself, but to radium emanations will quickly lose their

activity. As most radioactive waters do owe their activity to radium emanations, they must be used at the springs. Jour. A. M. A., April 25, 1914, p. 1348).

Since publication of New and Nonofficial Remedies, 1914, the following articles have been accepted for inclusion with "N. N. R." Those accepted during the current month are made prominent by the use of capitals.

H. M. Alexander and Co.: NORMAL HORSE SERUM; Typhoid Vaccine, Immunizing.

Antiseptic Supply Co.: CAUSTICKS, CAUSTICK APPLICATORS; CUPRIC-STICKS; STYPSTICKS.

B. B. Culture Laboratory: B. B. Culture.

Farbwerke Hoechst Co.: Amphotropin; EREPTON.

Fairchild Bros. and Foster: Trypsin. Hoffmann-La Roche Chemical Works:

Thiocol; Syrup Thiocol, Roche; THIOCOL TABLETS.

Hynson, Westcott and Co.: Phenolsulphonephthaiein, H. W. and Co.; Phenolsulphonephthalein Ampules, H. W. and Co.

Merck and Co.: Cerolin.

H. K. Mulford Co.: ACNE SEROBACTERIN; Anti-Anthrax Serum, Mulford; Antistreptococcus Serum Scarlatina, Mulford; COLI SERABACTERIN; Disinfectant Krelos, Mulford; NEISSER SEROBACTERIN; PNEUMO SEROBACTERIN; Salicylos; SCARLATINA STREPTO SEROBACTERIN; Staphylo - Serobacterin; STAPHYLO ACNE SEROBACTERIN; Strepto-Serobacterin; Typho-Serobacterin.

Riedel and Co.: NEW BORNYVAL.

Reinschild Chemical Co.: PHENOL-PHTHALEIN AGAR.

E. R. Squibb and Sons: SODIUM BI-PHOSPHATE, SQUIBB; Tetanus Antitoxin, Squibb.

Aseptic Chemical Co.: Freemann's Russian Mineral Oil: Having been found to comply in all respects with the requirements of the U. S. Pharmacopoeia for liquid petrolatum and not being in conflict with the rules, the Council held Freemann's Russian Mineral Oil an official article not requiring admission to New and Nonofficial Remedies.

Book Reviews

The Practice of Pediatrics.

THE PRACTICE OF PEDIATRICS. By Charles Gilmore Kerley, M. D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital. Octavo of 878 pages, 139 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$6.00 net; half morocco, \$7.50 net.

The preface to Doctor Kerley's Pediatrics (a model preface) tells us that this volume is in no way a revision of a former work by the same author issued some years ago under the title Treatment of Diseases of Children, but is a larger and more comprehensive volume dealing with the Practice of Pediatrics and comes as a result of the requests for such a volume from many sources.

The author is professor of Diseases of Children in the New York Polyclinic Medical School and Hospital, and from the wealth of his experience and the abundance of material at his command has presented to the profession a Practice of Pediatrics that bids fair to rank among the classical books on that subject.

The book is practical in every respect and one to which the general practitioner can turn feeling that help will be found. There is a lack of unnecessary theorizing and polemic discussion.

Diseases are classified and particular attention seems to have been paid to treatment.

Two chapters are added which make the volume more valuable. One discusses Gymnastic Therapeutics and the other Drugs and Drug Dosage.

We were particularly well pleased to note that so distinguished an authority defends the practice of giving the mother prescriptions for "coughs, for head colds and for constipation." In defense of this practice the author states that "I prefer to have my patients take the remedies I prescribe, and which are harmless, rather than to have them run the risk of the adminisatration of opium and alcohol, which would be very apt to be given if this precaution were not taken." We believe the doctor is absolutely right in this respect.

The illustrations and plates are all that could be asked and the press work up to the usual standard of the publishers. We have seen no volume in recent years that we can more conscientiously recommend to the general practitioner.

Goepp's State Board Questions and Answers.

STATE BOARD QUESTIONS AND ANSWERS. By R. Max Goepp, M. D., Professor of Clinical Medicine at the Philadelphia Polyclinic. Third Edition thoroughly revised. Octavo volume of 717 pages. Philadelphia and London: W. B. Saunders, 1913. Cloth, \$4.00 net; half morocco, \$5.50 net.

The new third edition of Goepp's State Board Questions and Answers has been thoroughly revised and much new material has been added to cover questions as found in a review of the lists of the various state boards.

The newer fields of serology and chemotherapy have been covered by appropriate questions as have also the recent innovations in the treatment of syphilis.

A work of this sort finds its place in several ways, but particularly valuable is it to the prospective applicant for examination before state boards as a means of a rapid review and as such we heartily commend it.

ELECTRICITY IN DISEASES OF THE EAR, NOSE AND THROAT. By W. Franklin Coleman, M. D. M. R. C. S., Professor of Opthalmology in Illinois School of Electric Therapeutics, Chicago, Illinois, Courier-Herald Press, Chicago, Illinois.

This book is not only valuable to the specialist but equally so to any one using electricity in diseases. It is written and illustrated in such a way that the practical usage is easily grasped. The subject is not considered merely as a therapeutic agent but the many valuable diagnostic features so essential to modern practice are thoroughly exploited and written in such manner that it makes interesting reading.

The illustrative cases both from the writer's practice and frequently quoted from other authors show the wide scope of diseases in which electricity can be used. No doubt if the profession were more familiar with this subject the therapy of the special sense organs would be materially simplified, while improvement and recovery in many cases would result where failure often occurs; for instance in the section on optic atrophy, case after case is shown where electricity accomplished what no other method could promise, while the same

may be said in regard to some of the cases of keratitis, glaucoma, and in some of the diseases considered under the nose and throat. The various currents are considered and the indication as to which to utilize, can be appreciated only from close study of work of this kind and from practical experience. The casual remarks on electricity as embodied in most text books on diseases of the special sense organs and in magazine articles along this line, are usually of little value to the specialist who is not already familiar with the subject.

It is not essential that the specialist must have the complete electrical outfit for all these methods, as in most cities there are physicians who devote their entire time to electro-therapeutics and can accomplish more, perhaps, by working with the specialist, than the specialist can do by himself.

E. R. C.

PROGRESSIVE MEDICINE, a quarterly digest of advances, discoveries, and improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., assisted by Leighton F. Appleman, M. D. Volume 1, March, 1914. Surgery of the Head and Neck. Surgery of the Thorax. excluding diseases of the Breast. Infectious Diseases. including Acute Rheumatism, Croupous Pneumonia, and Influenza. Diseases of Children. Rhinology and Laryngology. Otology. Published by Lea and Feliger, Philadelphia and New York, 1914.

Surgery of the Head and Neck, by Charles H. Frazier, M. D., is a very instructive department. Considerable space is devoted to the pineal body; the hypophysis; special nerves of the cranial group; cancer, and the ductless glands. The review of the literature covering this depart-

ment has been extensive, and it has been covered exhaustively, and the discussion added, makes a very explicit and lucid chapter and the profession has in this a complete status of this branch for the past year. Surgery of the Thorax, by George P. Muller, M. D., devotes special attention to the surgery of the heart; tuberculosis of thorax with artificial pneumothorax, and considerable space to carcinoma of the esophagus. It is well written, and is up to the standard of corresponding chapters in prior issues of this quarterly. One of the most interesting and important sections in this issue is that by Dr. Ruhrah on Infectious Diseases. Much new and advanced data is found in this chapter. Every line of it is interesting and important. Because of the amount of work being done in this branch, and of radical changes in opinion being necessarily brought about because of advanced discoveries, this is a most valuable chapter for the profession. Under Diseases of Children, by Dr. Floyd M. Crandall, we have a chapter more general than one devoting more space to special subjects. This is brought up to date in review and discussion. Rhinology and Laryngology, by George B. Wood, M. D., takes up the nasal fossae and renders a comprehensive review of advances and recent literature. Next the accesory sinuses; the pharynx; the tonsils receiving liberal space, and concluding with a similar treatise upon the larynx—a valuable chapter. The concluding chapter is that one upon Otology, by Arthur B. Duel, M. D. The chapter is exhaustive and general, with special space devoted to those topics having received special stress during the past year. It likewise is an instructive contribution of a concise and condensed nature. The volume closes with an index covering the entire work. T. C. S.

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No. 3

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The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

You want a larger and better journal
YOU CAN HAVE IT BY WRITING OUR ADVERTISERS: "I
SAW YOUR AD. IN OUR STATE
JOURNAL."

AVOR THOSE WHO FAVOR US

THE JOURNAL OF THE NEW MEXICO MEDICAL SOCIETY.

I trust the Managing Editor's appeal, in the May Journal to the Secretaries of the county societies, may bear fruit. It is certainly in bad taste for members of the New Mexico Medical Society to criticise their own Journal. especially when they contribute nothing to its upbuilding. I believe, however, that this criticism is thoughtless, and certainly would not be indulged in if there were a proper appreciation of individual responsibility. The Managing Editor cannot do it all, though to him rightly belongs the credit for bringing the Journal up to its present efficiency. How much more interesting the Journal would be if each number contained concise reports of the county meetings! Of especial interest and profit would be reports of clinical cases with discussions, Brethren, I know the Managing Editor has felt very much discouraged of late. Will you not rally to his support by sending him numerous reports of clinical cases? E. B. S.

THE DUTY OF A PHYSICIAN TO THE COMMUNITY.

It has been said in the past that money dominates everything, but at the same time there has been no profession known which has worked for lower compensation and which has produced better results than the medical profession. This is not said in a conceited way, but I have yet to find the man in the medical profession who would not for the good of the public work without a reasonable compensation.

If we will analyze and go back over the men who have done so much to protect the public, who have eliminated yellow fever, malaria and matters of that kind, it is somewhat painful to realize that the public does not appreciate in any sense the work of the medical profession. There may be one or two heroes whose actions are praised to the skies, but the work of the steady rank and file is not accredited.

Physicians have for years done more practical charitable work than they have been given credit for. Men are working today with loyalty to their profession for a minimum amount, and, unfortunately, some of those who obtain positions are doing work which could not be repaid by the community

in four-fold proportion. The amount of charity work and the amount of county work done by doctors who do their duty and who are honest, reliable and interested is a donation to the community itself which donation is by no means appreciated. I have in mind men who are working for \$20 a month and saving the county anywhere from \$500 to \$1,000, but no credit is given them.

To those of you who are familiar with Murphy's Clinics and in reading the last Record that came, you will find an argument which is emphatic in its remarks. The moment that you open such work to competition that very moment you put in (I am speaking now to the officials), the worst element that you possibly could have: cheap labor, cheap physicians and a corresponding result of inability to handle cases that come το their notice.

The time has arisen when county officials and State officials should realize that in handling sickness and disease it is absolutely essential that they get the best talent that is possible. It has been said, and very truly, that every man is worth to the State at least \$5,000. Will it not pay the State, in the event of that man not being able from trouble, sorrow or affliction to pay his natural debts, to keep him alive? Is it not a fact that the older countries, Germany, England and France, realize the conditions of keeping the working ability of men and women up to par and have made the necessary arrangements by which they can be kept up to the working problem?

Physicians have in the past forgotten their citizenship. It is not a question of working for favors from Legislatures or anything of this kind, but it is a question of educating the public up to the point when they will realize that the life of an individual, be he an honest laborer or a lawyer, means something to the State at large and it is our duty as physicians to take a more active part in public propositions than we have done in the past; not for ourselves alone, but for the general public at large. The lives of human beings are to be conserved and the longer you conserve those lives, the longer that individual will be a benefit to the State-will be a producer and indirectly, if you choose to put it from a selfish point, longer a payer of taxes.

OPTIMISM.

To look on the bright side of life and its affairs with an enthusiastic belief that everything is all right and for the best is ideal. This is especially true as it applies to those who come in contact with the sick. A physician, above all men, should be an optimist—ready to stimulate hope even though he may not have it himself. Hopefulness in the countenance and optimism in the words and actions of the physician are as sunshine in the sick-room; they stimulate hopefulness of recovery in the sick and a courage that often has potent influence for good. Even when recovery is not possible, the Journal of the American Medical Association thirks that good, not harm, is done. They make life worth living while it lasts. The psychic influence is always felt so long as consciousness remains. Paget speaking of hypochondriacs, says, "Your chances of doing good will depend mainly on the skill with which you can influence the patient's mind; for of the components of his case the mental condition is the worst."

THE LAS VEGAS MEDICAL SOCIETY.

The name, Las Vegas Medical Society, is perhaps a misnomer, as it is really a County Society. Its membership is composed of physicians in Las Vegas, and a few from the smaller towns of San Miguel and Mora counties.

For the past six months or more the interest has been on a gradual increase. The meetings are held regularly the third Wednesday of each month ,as a rule at the Commercial Club, but occasionally by invitation at some physician's residence. The most interesting feature of late has been the report of clinical cases pith presentation of the cases. Dr. Miller, Dr. Crail and Dr. Smith have presented cases to the Society. Two of the cases were of especial interest from a diagnostic standpoint, and one as regarded its management. These cases were freely discussed by each member present. As a result of the increased attendance and interest, good fellowship has markedly developed among the members. rare indeed to hear of an unkind remark uttered by one brother about another. The Society consists of as highminded, ethical practitioners as can be found anywhere. Each physician is vying with one another in giving the very best to his patients.

The Society is to be congratulated in having such capable and enthusiastic men at its head as Drs. Kaser and Crail.

Jealousy and malice cannot flourish in an active society. Each member sees too many good qualities in his fellows. After all, isn't it a fact that all that is necessary to appreciate our brothers at their full value is to know them? And how can we *know* one another if we do not meet together? E.B. S.

MEDICAL JOURNALISM.

We have before us the May number of the New Orleans Medical and Surgical Journal. It is its seventieth anniversary number. In the editorial department it contains much in interest the student of Southern Medicine. This journal has represented the best interests of the medical profession for these seventy years; may it continue to do so for many times that longer.

Few physicians realize how necessary good journals are to the profession, and how much we are dependent upon them. They must be both scientific and practical, receive our ideas and give us back others, and more than that, must constantly remind us of, and sustain us in, our ideals. first class journal has other functions than that of supplying scientific reading to its subscribers. It stimulates our desire for study, careful work and accurate observation. It represents the best that is in us, and poor journals are the mouthpiece of much that is indifferent and downright bad.

Physicians have always been the first observers of the health of the people; we, so to speak, have our fingers on the pulse of the community. All public health work and organization has sprung, directly or indirectly, from the medical profession. Doctors have always been the pioneers of this work. Physicians are busy with active practice, and consequently seldom have time to bush health campaigns in various fields. This accounts for the fact that so many laymen, who have retired and are wealthy, have become active

and have materially aided in carrying to a successful conclusion certain lines of work. We will mention two in which the services of laymen have been invaluable: clean milk and tuberculosis. Without the assistance of good medical journals, public health work could not have reached the advanced stage in which it now is.

County and state journals are invaluable to the societies which they represent. They bind the individual members more closely together and keep them informed on local medical conditions. To exist they must receive a fair amount of assistance from the component societies and their members, not alone in contributions of medical and news copy, but in getting advertisements and making such profitable. The doing, or failure to do this, makes or mars a journal. The support of the profession is an absolute necessity.

Until comparatively recently no great amount of attention was paid to the character of some of the advertisements appearing in the columns of many of the state journals. Some of these journals were more or less financially dependent upon this undesirable matter. The American Medical Association has taken it up, and the loss of income due to the elimination of these advertisements has been a severe financial blow to some of these journals. This loss must be made good, and it can be, if the individuals will only give a reasonable amount of assietance.

Our mail is full of pseudo-journals published or controlled by pharmaceutical houses. They are all subsidized, their statements are "interested," and we should not take too seriously anything we read in them. Most of these firms employ experts, and any incorrect and misleading statements they make are usually made knowingly, and are deliberate bad faith towards the medical profession. These journals do us a direct injury and an indirect one to the patient by preventing him from getting the benefit of correct treatment.

We feel it our duty to refer to the great good accomplished by journals edited by first class men for the benefit of the laity. We wish to mention particularly The Journal of the Outdoor Life.

It will be impossible in an editorial to more than scratch the surface of the subject, "Medical Journalism," but in closing we cannot refrain from stating that a medical journal is largely the mirror of the character, ideals and ability of the editor or editors. To do his best work the editor needs the constant sympathy and support of his colleagues. Assist him, and he will do more than his duty by you.

E. C. P.

THE MEDICAL RESERVE CORPS.

While the Medical Reserve Corps was created for a broader purpose than that of having available a list of trained men on whom to call in time of war, at the same time this was one of the important reasons for its organization. There are over twelve hundred officers on the Medical Reserve Corps (inactive list), and those who are willing to some will and the day be sufficient for any situation that may develop at the present time or in the near future. The Surgeon-General of the Army has sent a circular to each of the officers of the Corps,

in which he submits five questions, to which the officers are asked to answer "yes" or "no." The questions are:

- 1. Are you ready to accept active duty in your home city or its immediate vicinity should occasion require?
- 2. Are you ready to accept active duty at camps of mobilization, where recruits will be examined?
- 3. Are you ready to accept active duty in Army hospitals in the United States or elsewhere?
- 4. Are you ready to accept active duty with troops in the field?
- 5. How soon after receiving notice that your services are desired can you leave your home?

It will be noticed that an opportunity to do other effective work is here given those who, while willing to do their part, for some reason or other are not able to go to the front. Many of the officers are men who have organizing ability, who have been connected with hospitals, and who, for this reason, would be of great assistance in administrative work. now belonging to the Medical Reserve Corps are men beyond the age-limit for entering as volunteer surgeons for military service or, in fact, for active work in the field. In time of war, however, says The Journal of the American Medical Association, there is much to be done besides following the troops: recruits must be examined, hospitals equipped, hospital supplies of all sorts selected, inspected, purchased and distributed, base hospitals maintained, and wounded and incapacitated men transported. All of these duties can be performed by men who, though they have not had actual military training or experience, are able to relieve the regular military officers whose services can be utilized where they will be most valuable.

About a year ago The Journal of the American Medical Association published statistics showing the prevalence of typhoid fever since 1906 in those cities of the United States having over 100,000 population. These cities number fifty-one and include nearly one-fourth of the population of the country. The fact that sanitary improvements have been inaugurated in some localities as the result of the interest aroused by the facts published has led The Journal to collect the facts regarding typhoid conditions for 1913 in the same cities.

OUTBREAKS IN NEW YORK AND PHILADELPHIA.

TABLE 1.—DEATH-RATES FROM TYPHOID . IN CITIES OF OVER 500,000 POPULATION.

	Death	s from		
		oid per		
	100,000		Av.	Av.
	Population		1911-	1906-
	1913	1912	1913	1910
New York	7.0	9.8	9.3	13.8
Boston	8.4	8.1	8.6	16.0
Chicago	10.5	7.5	9.6	15.5
Cleveland	13.5	5.9	11.4	16.5
Philadelphia	15.7	12.5	14.1	42.1
St. Louis	16.9	10.4	14.2	16.1
Pittsburgh. Pa	18.1	12.7	18.5	74.3
Baltimore	23.6	23.9	24.9	34.6

New York shows not only the lowest typhoid rate in its history, but also a rate that compares creditably with the typhoid rate in European capitals. This low rate was reached in spite of a milk-borne typhoid epidemic which involved several hundred cases in Manhattan during September and October. Philadelphia suffered in 1913 from an unusual outbreak, beginning about the end of April and continuing for several months, an excessive amount of typhoid developing in the district

served by the Torresdale filters. From 70 to 75 per cent of all the cases in the city originated in the infected district. This localization of the typhoid excess in the region supplied by a particular source fixed responsibility clearly on the water-supply. The water on leaving the filter-plant was pure, so evidently infection occurred through leakage into the pure-water mains. It was then learned that a large number of manufacturing plants in the affected district maintained a dual piping system for fire protection or some other purpose—one set of pipes carrying the filtered city water, the other the raw and highly polluted water of the Delaware River. In such a system any defect of the valves or any accident to the separating devices would result in a calamitous mixing. Over 140 of these dual connections were severed by order of the Board of Health and the number of typhoid cases in the affected district has since greatly decreased.

In Cleveland the 1912 rate has more than doubled in 1913. The increase is so great that there is reasonable ground for concern. The Cleveland water-supply is at present derived from Lake Erie without any filtration. Although the water is treated with calcium hypochlorite, evidently the amount of disinfectant used during part of 1913 was not adequate for the purification of the water. It is not surprising that plans are on foot for a filtration plant.

AN INCREASE IN CHICAGO.

A somewhat disquieting typhoid increase occurred in the fall of 1913 in Chicago. The lake water was held responsible by some, but there is no conclusive evidence in support of this

belief. Baltimore still leads this group of cities in excessive typhoid fever, but maintained substantially the same rate in 1913 as in 1912, in the face of a typhoid increase in all the other cities of the group, excepting New York.

TABLE 2.—DEATH-RATES FROM TYPHOID IN CITIES OF 300,000 TO 500,000 POPULATION

	Deaths from			
		hoid per		
	100,000		Av.	AV.
	Population		1911-	1906-
	1913	1912	1913	1910
Cincinnati	6.4	7.5	8.5	35.0
Newark, N. J	7.9	7.1	8.4	14.6
Milwaukee, Wis	11.2	25.3	18.6	27.0
Minneapolis	12.4	11.5	11.8	32.2
Los Angeles, Cal.	13.5	14.6	13.6	19.0
Buffalo, N. Y	15.3	11.4	17.5	22.8
Washington, D. C.	16.4	21.2	19.5	36.9
San Francisco	16.7	14.1	15.5	27.3
New Orleans	16.9	14.0	20.5	35.6
Detroit	27.5	17.1	20.1	23.4

Cincinnati has succeeded in bettering a little its excellent record for 1912. Washington recorded the lowest typhoid rate in its history, less than half its average for the years from 1906 to 1910 (Table 2). Remarkable improvement in 1913 is exhibited by Milwaukee. There can be little doubt that the Milwaukee reduction is due primarily to the persistent use of hypochlorite in the water supply. It shows what may reasonably be expected in this typhoid-ridden city when the water supply is permanently and thoroughly protected from sewage contamination.

The great improvement in recent years in New Orleans is worthy of remark and is perhaps due to the extension of a modern sewerage system in that city.

Minneapolis, which ranked eighth in the list in the period from 1906 to 1910, ranked third in the period from 1911 to 1913. The rate for 1913 (new filtration plant in operation since January) differs little from that for 1911 and 1912, when the unfiltered water was treated with hypochlorite.

THE HIGH RATE IN DETROIT.

Detroit stands out in Table 2 with a conspicuousness that can hardly be pleasing to its citizens. The Detroit typhoid-rate for 1913 was the highest in the group and nearly double that of the next highest on the list. Only four other cities in the whole fifty-one had a higher rate than Detroit, and three of these are in the Southern states. There has been little disposition in Detroit to admit that the drinking water might be responsible for the relatively high typhoid prevalence, and there is still a tendency on the part of some of the Detroit newspapers "to rebuke and refute the alarmists." One paper warns its readers not to "take the international report on the water supply of the Great Lakes too seriously," and follows its reassurance with the jaunty remark: "From what the scientists say we folks here must have all died from typhoid fever long ago." The citizens of Detroit certainly do not relish having the highest typhoid-rate, barring one, of any Northern city, nor will they subscribe to the declaration that "as a matter of fact, typhoid fever is not even one of our grave menaces in this city." Why should Detroit shut its eyes to the facts?

TABLE 3.—DEATH-RATES FROM TYPHOID IN CITIES OF 200 000 TO 300,000 POPULATION

	Deatl	ns from		
	Typh	eid per		
	100,000 Population		Av.	Av.
			1911-	1906-
	1913		1913	1910
Seattle, Wash	4.9	7.4	7.3	25.2
Port'and, Ore	7.8	16.9	14 2	72.3
St. Paul. Mirn	8.3	10.2	9.5	18.0
Providence, R. I.	10.0	10.3	10.8	14.3
Rochester, N. Y.,	109	11.8	108	12.4
Jersey City, N. J.	10.5	7.5	8.1	12.6
Penver	12.7	13.0	14.4	35.5
Kansas City, Mo.	21.6	12.8	19.4	35.6
Loinsville, Ky	21.7	18.9	21.6	52.6
Indianapolis	24.5	18.3	23.0	30.4

The figures for this group are encouraging. Six out of the ten cities

report a lower typhoid-rate in 1913 than in 1912, and all ten had a lower average for the three years, from 1911 to 1913, than for the years 1906 to 1910, the reduction amounting in three cases (Seattle, Denver and Louisville) to more than one-half (Table 3). Seattle reported for 1913 the lowest death rate of any of the fifty-one cities. The Kansas City rate for 1913, on the other hand, is so much higher than that for 1912 as to suggest inquiry.

TABLE 4.—DEATH-RATES FROM TYPHOID IN CITIES OF 125,000 TO 200,000 POPULATION

	Deatl	as from		
	Typh	oid per		
	100,000		Av.	Av.
	Population		1911-	1906-
	1913	1912	1913	1910
Scranton, Pa	6.4	8.7	9.0	31.4
Paterson, N. J	6.8	4.6	10.9	19.3
Oakland, Cal	9.1	9.0	10.2	21:5
New Haven, Conn.	11.3	24.5	19.4	30.8
Worcester, Mass.	12.3	6.6	8.5	11.8
Syracuse, N. Y	13.0	16.8	15.2	15.7
Atlanta, Ga	16.6	35.2	35.9	58.5
Richmond, Va	19.2	16.2	17.6	34.0
Columbus, Ohio	19.2	20.2	17.7	40.0
Memphis, Tenn	30.1	56.2	49.2	35.3
Birmingham, Ala.	36.0	38.0		
Toledo, Ohio	41.8	33.0	32.5	37.4

Group 4, like Group 3, shows a lower death rate in most cases for 1913 than for 1912. New Haven reports the lowest death rate in its history, less than half that of the preceding year. Its rate is still twice that of the neighboring city of Bridgeport. Worcester, after maintaining a reasonably low record for a series of vears, fell from grace in 1913 and recorded a higher typhoid-rate than the average for the preceding seven years. Atlanta and Memphis report a noteworthy decrease. Toledo an increase. Only one city (Memphis) has a higher average for the period from 1911 to 1913 than for 1906-1910. Two cities maintained about the same level (Syracuse and Toledo); all the others show a substantial reduction, especially marked in the cases of Scranton, Richmond and Columbus. Toledo continues to have a high rate for a northern city.

TABLE 5.—DEATH-RATES FROM TYPHOID IN CITIES OF 100,000 TO 125,000 POPULATION

	Death	as from		
	Typh	oid per		
	100,000 Population		Av.	Av.
			1911-	1906-
	1913		1913	1910
Bridgeport, Conn.	5.4	7.4	5.5	10.2
Omaha	6.9	13.2	21.7	40.8
Spokane, Wash.,	7.2	16.9	20.9	50.4
Cambridge, Mass.	9.2	2.8	5.6	9.8
Lowell, Mass	10.0	9.2	8.6	13.9
Fall River, Mass.	10.5	18.8	15.0	12.5
Hartford, Conn	11.5	12.7	14.7	18.9
Dayton, Onio	15.1	17.9	17.1	22.4
Grand Rapids,				
Mich	16.7	34.0	25.6	29.7
Albany, N. Y	27.4	17.7	21.0	17.5
Nashville, Tenn	36.1	30.1	39.4	61.2
21002111109				

Grand Rapids shows the greatest change in any city in Group 5, the typhoid rate being cut in two in this the first year of operation of the new water filter. Fall River also shows marked improvement. Albany suffered in April, 1913, from the flooding of the slow sand-filtration plant with the polluted Hudson River water. From April 1 to May 1, 180 cases of typhoid were reported. Five deaths from typhoid were reported in April and seven in May or nearly one-half the year's record (twenty-eight). But for this outbreak the Albany death rate would have been apparently very close to that of 1912.

Nashville, Tenn., had a higher rate in 1913 than in 1912. Is there any reason why Nashville should have a typhoid rate more than twice as high as New Orleans?

Only three cities have a higher average typhoid rate from 1911 to 1913 than from 1906 to 1910 (Memphis, Tenn., Fall River, Mass., and Albany, N. Y.).

Cities with an average typhoid death rate in the years from 1911 to 1913 below 10 are New York, Boston, Chicago, Cincinnati, Newark, Seattle, St. Paul, Jersey City, Scranton, Worcester, Bridgeport, Cambridge and Lowell -thirteen cities as contrasted with one (Cambridge) having an average below 10 from 1906 to 1910.

TABLE 6.—TOTAL AVERAGE TYPHOID

DEATH-RATE FOR 1912 AND 1913.

Total Population
(51 Cities)

(Estimated by
U. S. Census-Bureau Typhoid Death-Rate
Methods)

1913 ... 21,844,002 2,775 12.70
1912 ... 21,472,847 2,731 12.72

In 1913, 26 cities had a lower tvphoid death rate than in 1912, and 25 a higher; 14 had a death rate under 10 in 1913 and 15 in 1912. not a "typhoid year" in the sense of an actually increased typhoid rate, it is evident that 1913 was not marked by any considerable typhoid reduction.

East Las Vegas, N. M., June 9, 1914. The Journal of the New Mexico Medical Society, Las Cruces, N. M.

I beg to report the following licenses granted at the last meeting of the Board of Health and Medical Examiners:

UPON CREDENTIALS.

Julius C. Petit, graduate of the College of Physicians and Surgeons, Keokuk, 1872.

David H. Simmons, Vanderbilt, 1893.

Stanley G. Zemer, Rush, 1913.

Lucien L. Miner, Columbia, 1904.

Andrew J. Montgomery, Atlanta Medical, 1897.

Hal L. Speedy, Pittsburgh University, 1911.

George F. Bartholomew, Omaha Medical, 1902.

Caleb S. Middleton, Hahnemann Med., Philadelphia, 1892.

UPON EXAMINATION.

Wm. C. Matthews, American Med., St. Louis, 1913.

John H. Sanford, Univ. of Tennessee, 1913.

J. M. Gregory, Grant Univ., Chattanooga, 1904.

Cammillo Passudetti, Padova Med., 1886.

Albert E. Collyer, Hering Med., Chicago, 1904.

W. E. KASER, Secretary.

The sixty-fifth annual session of the American Medical Association will be held at Atlantic City, New Jersey, from Monday, June 22 to Friday, June 26th, 1914.

The 39th annual meeting of the American Academy of Medicine will be held in Atlantic City on June 19 to 22, 1914. With the exception of the Sunday afternoon Conference, the various sessions will be held at the Hotel Dennis, which will also be the Academy headquarters.

The American Proctologic Society will hold its sixteenth annual meeting at Atlantic City, N. J., on June 22 and 23, 1914. The headquarters and place of meeting will be Hotel Chalfonte. The profession is cordially invited to attend all meetings.

The Clinical Congress of Surgeons of North America will hold their fifth annual session in London, England, during the week of July 27th, 1914.

We have been favored with a complete program of this meeting and while it is full of interesting titles and promises to be a most scientific surgical meeting we feel constrained to ask, "Of what value is this meeting to American Surgeons?" "How many of them can find time or even means to attend?" American Surgery is Surgery is American Surgery is Surgery is Surger

can Surgery and the Clinical Congress of Surgeons of North America has no more right to hold its annual session in London than the New Mexico Medical Society has to hold its annual meeting in Peru.

A hasty glance over the program sent us shows that apart from the addresses of welcome and the addresses of the incoming and retiring presidents, there are promised twenty-seven papers. Of these twenty-seven papers, one comes from Canada, seven from the United States and nineteen from England, Ireland and the Continent. Truly a Congress of North American Surgeons! The preliminary clinical program is made up *entirely* of men from London.

The point that this Journal desires to make is that a Clinical Congress of Surgeons of North America has no business to meet in London where the rank and file of American Surgeons cannot attend. Our international meetings should be reserved for our international Associations and North American Surgeons should not be expected to follow the lead of the big men of the surgical section of the North American profession, who sometimes play to the galleries, to a meeting place beyond the seas.

THE DECREASING LIST

OF MEDICAL SCHOOLS

The progress in medical education during the past year in the direction of the improvement of the stronger medical schools has been most encouraging. This progress has taken the form generally of better hospital relations, better equipped laboratories, full-time professors, and the addition of teachers dealing with particular phases

of medical education. The Yale Medical School has secured a most desirable arrangement under which it has the entire control for teaching purposes of the New Haven Hospital. Fordham University Medical School has called to its head a dean of high medical standing, and has furnished additional facilities for laboratory and hospital work. In the south, where medical schools of the stronger type are greatly needed, Johns Hopkins University has received a gift of \$1,500,000 from the General Education Board, and the Vanderbilt University Medical School has been strengthened by a gift of \$1,000,000 from Mr. Andrew Carnegie on behalf of the Carnegie Corporation. The magnificent enterprise of the Washington University Medical School at St. Louis has gone forward with the completion of its full list of hospitals and with the working out of a hospital arrangement of the most modern and desirable type. The School of Medic ve of Western Reserve University has strengthened its position by raising an endowment of a million dollars. The medical school at Cincinnati has greatly increased its hospital facilities, and has made an earnest effort to increase its resources. In all sections a movement is noticeable looking toward the strengthening of the medical schools in the direction of better teaching, better clinical facilities, right relations with hospitals, and the employment in increasing measure of professors of clinical medicine and of surgery who are primarily devoted to their chairs rather than to the work of a practitioner. All these marks of progress are most gratifying. Not less gratifying is the steady diminution in the number of inferior medical

schools, of which the number still remains far too great. In 1910 there were 162 medical schools in the country. There are at present 115, a decrease of 47. The work done by the Council on Education of the American Medical Association has been most noteworthy, both in the direction of strengthening the good schools and in making impossible the inferior and unnecessary schools.

The Council on Education through its officers now grades its schools in four classes: Class A+, which are considered acceptable medical schools; Class A, which are colleges lacking in certain respects, but in the main acceptable; Class B, colleges needing general improvements to a considerable extent before they can be considered acceptable institutions; and finally Class C, among which are reckoned those that would require complete reorganization and the furnishing of a very large increase in income in order to do the work of even a respectable medical school. Colleges in the last class are not recognized by the licensing boards of twenty-four states. The 115 graded colleges are now distributed as follows: in Class A+, 24; in Class A, 39; in Class B, 23; in Class C, 29. A more concise description of these four grades of colleges would be: Class A+ represents the modern type of college; Class A represents the well-meaning college that has not as vet acquired the facilities for presenting a medical educttion of the best type; Class B includes as a rule colleges which are entirely too weak to offer such a medical education as the student of today should receive; while Class C includes colleges so inefficient that they would not be tolerated in any

other country. Of this last group three are in California, three are in Illinois, five in Missouri, two in New York, two in Tennessee, two in North Carolina, two in Wisconsin, and two in Texas.

The 1913 report of the Council on Medical Education announces its requirement, beginning with 1914, of one year of college work for entrance to all of the first two grades of colleges. About thirty-two schools now require two or more such years and six have arranged to do so, while twenty-four others require one year and seventeen have agreed to do so. Twelve state boards require more than high school graduation for admission to medical study. In twenty-seven states of the Union admission to medical schools is now a matter of state control through the state medical board.—(Carnegie Foundation 1913 Report.)

No wide awake physician omits the reading of advertisements. He must read advertisements to keep posted. The best goods in all lines are advertised. Advertised goods have to maintain a standard. The advertised goods are the biggest sellers. This Journal does not carry any advertisements that the publisher does not believe are just as represented. Keep posted, doctor! Tell our advertisers you saw their announcement in the New Mexico Medical Journal.

COMMUNICATION.

R. E. McBride, Editor New Mexico Medical Journal, Las Cruces, N. M. Dear Sir:—The Council on Health and Public Instruction of the American

Medical Association, has established a medico-legal bureau for the purpose of collecting, arranging and studying all of the available material, bearing on medico-legal questions of interest to physicians, or relating to public health matters. This bureau is in charge of Mr. John D. Hubbard, a graduate of the Northwestern University School of Law. We desire to secure all available material, bearing on medico-legal subjects, especially all pamphlets, bulletins, monographs, circulars, legislative bills, laws, reports or special articles on any medico-legal or public health topics. As rapidly as material can be secured and studied, we hope to furnish information to all those interested on any topic coming within the range of the bureau. We shall greatly appreciate it, if you will kindly send us, at any time, any such material that may come into your hands. This will be properly classified, cataloged and preserved for use in answering inquiries on any medico-legal question. We hope to make this bureau of service to the officers and members of state associations, executive officers of state boards of health and medical examining boards and any others interested. Any assistance or contributions will be appreciated and of great assistance in carrying out the plans of the bureau.

With cordial thanks for your many courtesies in the past, and hoping that we may, through this bureau, be of some assistance to you in the future, we remain, Very truly yours,

Frederick R. Green, Secretary, Council on Health and Public Instruction.

COMMUNICATION.

Editor New Mexico Medical Journal, Las Cruces, N. M.

Dear Sir:—I am sending you report of a case which I presented to the Las Vegas Medical Society, at its last regular meeting, May 20, 1914, and which was deemed of sufficient interest to report in our Journal. Indeed, a case of abdominal pregnancy, going on to full term and discharging spontaneously through the abdominal wall, deserves permanent record.

This case was brought to my office May 16, 1914, from a long distance in the country, because of a discharging sinus in the abdominal wall, which refused to heal.

CASE REPORT.

Bonifacia Lucero Garcia, married, aged 32, had one child two years ago.

Present illness: Thought she was pregnant, as her abdomen began to enlarge; had morning nausea; enlargement of breasts. Began having severe pains at the second month that radiated from the umbilicus to the pubes; pains were more or less constant, at times excruciating, until three months before pregnancy terminated.

Distinct movements of the child were felt both by the patient and the mother at the fifth month, and were so felt until two months before she was delivered.

Two months before delivery, the enlargement of the abdomen was more rapid than before; the pains were more constant and severe; she was burning up with a fever; chills began followed by sweats; at this time a blister was noticed above the pubic hairs. They applied a poultice and in three days the thing broke, discharging three chambers full of green stinking pus

and so kept on discharging for two weeks when some hairs came out, followed in a few days by a dead child eight months old. Skin of child was completely macerated.

Woman made a good and rapid recovery, and abdominal wound is about healed up. Child came April 28, 1914.

Your very truly, M. F. Des Marais, M. D.

Original Articles

THE CONSTITUTION OF PROTEIDS

Ву

Earl Sprague Bullock, M. D.

Physician-in-Chief to The New Mexico Cottage Sanatorium, Silver City New Mexico.

Read before the Grant County Medical Society, Feb. 27, 1914.

There is today a full appreciation that the protein molecule is the very basis of life. For many years there has been dissatisfaction with the general terms applied heretofore, and a desire to know exactly of what such things as albumen are composed, the units of which they are built and even how these units are arranged in the molecule. Not only should we know how the protein molecule is built, but also how it is destroyed in the body. We should be able to follow it from the stomach or alimentary canal to muscle, brain, etc., and back again to the form in which this substance is eliminated.

Not all the steps of this progress are complete as far as our knowledge is concerned but each and every year, and I might say nearly every month witnesses some new addition to our information regarding the biochemistry of proteins.

The protein molecule though actually cumbersome in size as compared to other chemical units is a very delicate matter indeed. For it is easily disrupted, and in fact one of the chief difficulties which have stood in the way of its elucidation has been the ease with which it is destroyed. It required the genius of an Emil Fischer to break the ground for the basis of our present knowledge of the subject. He furnished the method which has permitted progress in this branch of chemistry. The ester method by which this was done has been entrusted by Fischer to his pupil Abderhalden, while the master chemist himself has devoted his efforts to the synthesis of the polypeptides, and the optical projection of the amino acids, substances of transcendent importance in metabolism, and truly the form in which the cellular particulates of the body utilize the proteins as food.

Our knowledge of the chemistry of proteoses, peptones, and of enzymes as well, is still very incomplete, and yet wholly necessary to an understanding of the problems of nutrition. We must start however, if science is to be crowned with full knowledge of the biochemistry of the body, with the analysis of proteins.

As a young man it was my privilege to sit at the feet of a great chemist—one who in his old age had a full appreciation of the value of the future of biochemistry to the human race. He said, prophetically, as it now seems, that the greatest strides in medicine in the coming century would come

through chemistry and chemists. That I have been able to follow with some degree of understanding the developments of biochemistry during that past twenty-five years is due, wholly I think, to the thorough grounding I received from Dr. Kedzie at the Michigan Agricultural College. He made me understand the benzol ring, quite an accomplishment for an adolescent mind, and reflecting great credit upon the old doctor. We now comprehend, that the battle of the animal economy against disease and particularly those maladies due to infective microorganism, may be, in the final understanding, a question of parenteral digestion of proteins, with the liberation in the body of substances, which in nature's analytical laboratory, are poison at certain stages of their digestion, and at others either negative or harmless, or even possibly capable of utilization. It is indeed curious, that Pasteur, Metchnikoff, and Ehrlich, the three men who have done most for modern medicine. did not have a medical training; bearing out Dr. Kedzie's prophesy, all were chemists. Metchnikoff found the trail that led to phagocytosis, by watching the fate of certain organisms in the bodies of water daphniae, and there observed the solution or digestion of these pathogenic organisms in the motile cells of the daphniae. Then and there he surmised the existence in the cells of the daphniae of an enzyme like substance which he called cytase. He went to Pasteur with his discovery, and as long as the great man lived was associated with him.

Keeping in mind, Ehrlich's complements and amboceptors, Bordet's substance sensibilitrix, Metchnikoff's microcytase, and macrocytase, and the fixatives of other people is a pretty confusing problem, but it will simplify matters greatly if we remember that what they are mostly talking about are enzyme like principles which are capable of splitting, combining with and recombining with protein units which are either useful or harmful to the body, and in the case of the proteins of pathogenic organisms, always harmful. In fact, life and the struggle for existence may be defined, not in a large generalization such as that of Herbert Spencer, "life is the constant adaptation of internal to external relations," but rather more concretely as a battle between proteins and enzymes.

It is needless to say that a clinical person like myself cannot obtain knowledge of such a vast subject as the chemistry of proteins at first hand and I make frank confession of my obligation to a number of investigators, including Skraup, Fischer, Abderhalden, Wohlgemuth, Kempe, Jortner, Langstein, Neuberg, Sorensen, Plimmer, and many others. The proteins are divided into groups, according to origin, solubility, and other characteristics as follows:

- 1 Protamines, such as salmine, sturine, clupeine, scrumprine, etc.
- 2 Histones, like thymus histone, lota histone, and the histone from blood corpuscles.
- 3 Albumins, that is ovaalbumin, conalbumin, serum, albumin, etc.
- 4. Globulin, that is serum globulin, fibrinogen, myosinogen, myosin, legumin, conglubin, edistin, excelsin, etc.
- 5 Glutebins, such as occurs in wheat, etc.
 - 6 Gliadins, found in all cereals

7 Phosphoproteins, for instance caseinogen, etc.

8 Scleroproteins, as keratin from hair, etc., Callogen, gelatin, elastin, etc.

- 9 Conjugated Proteins (A) nucleoprotein that is nucleic acid in combination with any of the proteins in group 1, 2, or 3. (B) Chromoproteins which are certain substances in combination with proteins, as in haemoglobia
- (C) The glucoproteins, that is carbohydrates in combination with proteins as in mucin, and ovomucoid.

This does not begin to exhaust the list of known proteins, but will convey an idea of the extent of the subject and as well gives those most necessary to know. We must also mention some of the derivatives of the proteins:

- (A) Metaprotein, for instance acid albumin and alkali globulin.
- (B) Proteoses, such as caseose, albumose, globulose, etc.
 - (C) Peptone, such as fibrinpeptone
- (D) Polypeptides, such as glvcyl, alanine, leucyl, glutamic acid, etc

It is well to keep in mind that vith the exception of the protamines histones and proteid derivatives all proteins contain C, H. N. S, and 0 in pout this proportion:

C 51-55% H 7% N 15-19% S 0.4-2.5% O 20-30%

the formula of which is C726 H1174 N194 S3 0 214 which will give some idea of the cumbersome structure of the protein molecule. The above is the formula of globin, the basis of haemoglobin.

Phosphorous is also added in the nucleoproteins and the phosphoproteins. Although chemists have worked with proteins for over a century, the coming of a Fischer was necessary to give us anything like a clear idea of what they are really made and how they are built. He showed that the protein molecule is constructed of a series of amino acids. The amino acids which have been isolated are:

(A) Monoamino monocarborylic acids; they are, Glycine, Alanine, Valine, Leucine, Isolucine, Phenylalamine, Tyrosin, Serine, Cystin, Aspartic acid, Glutamic acid, Arginine, Lysine, Histidine, Priline, Oxyproline.

That these amino acids are the bricks of which the proteids are built, has been most graphically proven only recently by a Copenhagen biologist, who discovered that animals may be fed with these substances indefinitely by introducing them directly into the circulation, and the alimentary tract eliminated entirely as a factor in metabolism.

Besides the amino acids already mentioned, others will undoubtedly be discovered as time goes on. Investigators have been just about a hundred years finding out the ultimate digestive unit in proteids: while nature in her marvelous laboratory, constructs and reconstructs, analyses and synthesises all these substances and many others with celerity and ease. We now know that we build our muscles and every other part of the body containing nitrogen out of amino acids; to carry the problem further, and understand the next step after the utilization of the amino acids, the link between amino acids and urea, is the problem of the future.

The analysis of the protein molecules has been accomplished by means of fusion with an alkali, oxydation with permanganate, by the action of Halogen and by hydrolysis, the last being most important, as it is the method which has shed the most light. Hydrolysis is done by the action of acids, alkalies, proteoclastic enzymes, and as said before, has given us most of our knowledge of proteins. Using hydrolysis, we obtain a complex mixture of all the units or bricks of the protein molecule previously mentioned. The next step, their isolation, has been done by fractional crystallization of the compounds themselves, of their salts of copper, silver, etc. The residual uncrystallizable syrups, have only recently been elucidated. The substances mentioned are all monoamino acids, and a Hungarian chemist. Dreschsel, discovered that the protein molecule also contains diamino acids. In 1911, Fischer began his epochmaking work. This was the fractional distillation in vacuo, of the esters of these substances. As a result of this method, we know that about 70% of the hydrolysis products; we also know that phenylalamine, serine, alanin, are constituents of all proteids instead of a few as previously supposed. This method also furnished us with the new substances proline and oxyproline. As fast as new units or bricks have been discovered, the elucidation of their exact constitution has soon followed. This is true of every unit except oxyproline.

The study of the protein molecule falls naturally as follows:

(A) The chemical composition of the molecule; (B) the composition of the units or bricks, (C) the symbolis of the proteins, (D) the action of the enzymes on the polypeptides; one the first two will be considered in this paper, though our President has a om-

ised me a chance later in the year to discuss the last part or synthesis of proteids as far as present knowledge permits us to go.

Hydrolysis by acids, alkalies and proteoclastic enzynes, has been referred to, as the only method that has given any real knowledge of proteins. It is unfortunate, that hydrolysis by means of the enzynes, is never really complete. At a certain point, a complex body, antipeptone, is formed, which resists further action of the enzynes, therefore the use of enzymes will not do for the analysis of the proteids. It has been shown by Abderhalden and others, that a sufficient long boiling of a protein with either hydrochloric or sulphuric acids, will effect the complete hydrolyzation of the protein. After the prolonged boiling with the acids, the biuret test for proteids will tell if the hydrolysis has been complete. In a brief paper, it is out of the question to give the results of the analysis of all the proteins and their units; it will be unprofitable and tedious as well. I will therefore content myself with the analysis of a few typical examples, and for the purpose will select the monoamino acids, tyrosin and cystin. They have a very slight solubility in neutral aqueous solutions; they therefore crystalize out easily after hydrolysis, by neutralizing and concentrating the solution. Then, if the hydrolysis has been done by sulphuric acid, this can be completely removed by baryta. The action of the acid is continued until Mellon's test no longer shows tyrosin, when the resulting crystals are weighed and the exact proportion of tyrosin calculated. Both tyrosin and cystin are derived from hair, horn, egg shells, etc. Cystin may be separated from tyrosin by means of phosphopungstic acid, which precipitates the cystin from solutions containing tyrosin.

The isolation of the diamino acids, of which histidine is a typical example, is more difficult and tedious, than is that of monoamino acids. About fifty grammes of protein are hydrolysed with sulphuric acid. The exact amount of the protein is then estimated by determining the amount of nitrogen in ten c c. By means of baryta, the sulphuric acid is now removed; then the filtrate acid washings are evaporated down in vacuo at seventy C, and again made up to one liter. A determination of the nitrogen in ten c. c. of this solution gives, by difference, the quantity of nitrogen contained in the melanin which is carried down by the barium sulphate. It is designated as humin nitrogen "1." In this liquid two determinations are made of the nitrogen present as ammonia, which is then removed from the balance of the solution by evaporation with barium carbonate on a water bath. The two portions free from ammonia are then combined and made alkaline with barium sulphate: then the precipitate with barium carbonate is filtered off and washed by boiling with water three times. The excess of barium is removed from the filtrate by dilute sulphuric acid and the precipitate again filtered and washed Now filtrate and washings are combined together, evaporated, and again made up to one liter and the mtrogen contents once more determined. Allowing for the nitrogen given off as ammonia, the difference between this and the previous estimation gives the humin nitrogen "2" contained in the alkaline barium magnesia precipitate. We will now precipitate the histidine

from the solution which contains a small quantity of sulphuric acid. It is placed in a 5 liter flask and treated with a hot saturated solution of silver sulphate, which is added till the solution gives a yellow precipitate, when a drop is removed and tested with baryta water in a watch glass. If there be any undissolved silver sulphate at the bottom of the glass, it is dissolved by adding more water before a fresh quantity is added, in order that a yellow precipitate be given in the test-drop with baryta. As soon as sufficient silver is present to combine with the arginine and histidine, it is allowed to cool to 40 C, and then saturated with finely powdered baryta until some remains undissolved after repeated shaking. The precipitate which is formed, and which consists of the silver salts of argenine and histidine, is filtered off, and rubbed up together with the filter paper in a mortar with baryta, when it is again filtered off and washed with baryta water. The greater portion of the histidine is removed by precipitating with mercuric sulphate.

These examples of the analysis of a typical monoamino acid and of a diamino acid, are simple and easy compared with the analysis of some of the protein units. In spite of all the analytical work by so many investigators, covering the acids mentioned in the first part of this paper, there still remains a considerable deficit in the sum of the amino acids composing the protein molecule; in other words, some of the bricks are still missing. As no new unit has been discovered since 1904, it seems to follow that the deficiencies are due to losses incurred in isolating and purifying the amino acids, rather than to undiscovered units. It seems perfectly

plain, from the knowledge in the possession of biochemists today, that the various proteins are composed of the same units, and though two proteins of any group may contain the same amount of any unit, we are not therefore justified in claiming that they are identical, and even if they contained the same amount of all the units, they could be different, for the arrangement of the units in the molecule might not be the same.

As has already been indicated, it has not vet been possible to make a complete analysis of any protein, there are unaccountable losses in each and every instance. One thing seems clear however, and is of practical value in selecting proteins as foods, and that is, the proteins vary greatly in the amount of nitrogen they carry; for instance, chicken muscle, fish muscle, scallop muscle and beef muscle, all contain different proportions of nitrogen and all closely resemble the vegetable globulins. Of the proteins of the muscles, lysine is the most important. It has been observed, that as we ascend the scale of life from vegetables up, the amount of glycerine, alanine, leucine and proline increase, and who knows, this may be the final answer to the vegetarian, though they will probably come back with the work of recent American investigators who have found that even the protein contained in hay can be utilized by the human digestion if reduced to an impalpable powder.

It can be readily seen, that the number of proteins so far identified, has assumed large proportions; it is not however profitable to go further into their analysis, but rather to proceed directly to the practical application of our knowledge of the amino acids. For

long, it has been a matter of the greatest interest to both physiologists and physicians to determine the ultimate fate of the proteins in the body, and as the work of the Danish investigator previously referred to, seems to indieate, by means of the amino acids, we have reached the bottom. This is a really epoch-making discovery and proves beyond question that the proteins are ultimately split into amino acids which compose the stones out of which the nitrogenous portions of the body are built. It would be beside the purpose of this paper, to discuss the recent discovery of enzymes which decompose carbonhydrates, though, course, they must be of great importance in metabolism.

In the first part of this paper it was shown how acids and alkalies are employed in the first steps in the analysis of proteins and it is with pride, as an American, that I can point out the use which Victor Vaughan, of Ann Arbor, has made of this method in splitting the enormous protein molecule into two groups, a poisonous and non-poisonous one. Even if his theory of the application of his discoveries to infective diseases, does not receive ultimate confirmation, he has, with the isolating of his poisonous and non-poisonous sensitising group, made a tremendous advance in our understanding of proteids. It is truly remarkable, that any proteid, that for instance, from peas, beans, hay, muscle, egg-white, or particulate bacteria from the tubercle bacillus to the cholera vibrio, may be split in so simple a manner into a poisonous group and a sensitizing non-poisonous one, and that in each and every instance. when these poisonous groups are introduced into animals, they kill in exactly the same manner regardless of their source and that the death that follows, the preliminary symptoms completely duplicates anaphylactic shock. Lately von Pirquet, Friedburger, Schittenhelm and Weichardt, have all fallen behind Vaughan in the effort to place his theory of the mechanism of infective diseases on a firm foundation, though Doerr of Vienna still cries "unproved." Knowing Vaughan personally, and considering him my friend, it is an additional pleasure to record that I have always thought, ever since he showed how accurately he could reproduce in animals all the phenomena of fever by means of his split products, that he was doing wonderful things in the biochemical world.

We may take it as proved that the essential elements of bacteria are proteids. In order to be pathogenic, an organism must be able to fit into its own structure, the proteins of the body upon which it feeds. For the purpose of rendering these proteins fit for assimilation the bacteria must work as all other living cells do, through the medium of enzymes, and finally be able to synthesize the digestion products into its own body. These ferments may be either specific or general or both. Some of the ferments of bacteria require a definite range of temperature in which to do their work. It therefore naturally follows that all orgnisms which require a temperature much higrer or lower than that of the animal body cannot be pathogenic. Opposed to the bacterial enzymes are those of the body cells, which can also digest proteins, as for instance, the leucocytes, with what Metchnikoff in the early days of biochemistry called their microcytase and macrocytase. Each and

every living cell must have its own set of enzymes, as well as the capacity of making new ones on demand. Therefore an organism is pathogenic or not depending entirely upon whether or not it can grow in the animal body. When a bacterium introduced from without multiplies in the body with great rapidity there is an acute process, and when as in tuberculosis the bacillus is of slow growth, only sensitizing the body cells locally, the process is chronic. When an old, thin, worn out consumptive dies without any fever he is simply poisoned to death by the tubercle proteid, as surely as though it had been done by arsenic. In such an exhausted state the body will not even split the bacillary proteid.

Vaccination is simply a training of the body to supply a specific ferment, which will digest the protein of the invading organism immediately, or soon after its introduction into the body When a fatal dose of colon bacilli is injected into a G. pig there is a period of incubation of eight to twelve hours before the animal shows sighs of illness. This is the period of enormous multiplication of the organism in the body. The organisms are using the proteids of the pig's body for their own purposes. As the bacilli are intact there is no liberation of their protein poison, and therefore, during this period of incubation in any disease there are no symptoms. Virulence of an organism is largely a question of rapidity of multiplication. At the end of incubation, the pig becomes ill and depending upon dose either recovers or dies. When signs of illness are manifested the body cells have become sensitized, and then start the elaboration of a specific ferment which digests the bacillary protein, which is of course then set free to do its poisonous work. Recovery then depends either upon the complete breaking down into harmless amino acids of the bacillary proteid, or the manufacture of something which will combine with the poisonous molecule to render it inert. Probably the former process is nearer the truth and is in line with what we already know of parenteral digestion. The mind at this stage is naturally confused by the question of toxins and antitoxins—an entirely different matter. It should be remembered, however, that all this work grew out of the attempt to discover why organisms which did not produce a toxin were still capable of causing disease. We know of but three organisms which produce true toxins, the diphtheria bacillus, that of tetanus, and the botolitmus bacillus, and vet we have vastly more infectious diseases to account for in which no toxin is produced.

However, even though Vaughan's theory is proven, there must still be much work done to elucidate the exact manner in which the protein poison is ultimately destroyed in the body. It is not necessary that this mechanism should be general in character. For instance, in pneumonia, the cells of the lungs are those especially sensitized by the invading bacterium, and that is where the battle ensues.

Now, if into a healthy G. pig there is introduced a fatal dose of the dead protein of the colon bacillus, the period of growth is eliminated, but within a few hours, three or four, the pig is just as ill as the first one into which living bacilli were introduced. It follows then that it requires about four hours for the cells of the pig to be suf-

ficiently penetrated to cause sensitization and consequent elaboration of the ferment which splits the dead protein of the bacillus and sets the poison free. It is indeed fortunate for us that we cannot split at once the various organsms with which we are infected into their poisonous and non-poisonous groups, for if we did we would get at once the full effect of the liberated poisons. In fact all these processes overlap, and in one place we may be dealing adequately with the invading organism, while in another it has the best of us, and the former process must overtake the latter before recovery is possible or complete.

Vaughan now takes another pig and injects it with the free protein which had been obtained by splitting the bacillary substance in vitro. In this instance the entire incubation period, plus the sensitizing period, has been eliminated and the pig dies at once, just as though he had been shot through the head.

Some years ago I talked with Prof. Vaughan on the train en route to Washington. He had just succeeded in duplicating experimentally, most any type of fever in animals by injecting proteins. All sorts of fun was poked at the Professor oy his confreres who occupied the "seats of the mighty" in the lobby of the New Willard in Washington. As a matter of fact, from Cohnheim to Krayle, we never had a chance to understand the mechanism of fever, until Vaughan did this work. Now when all Europe is beginning to consider Vaughan's work, perhaps some of our own men will recognize its importance. Fever is simply the result of heat produced in the body when it is busily engaged in its wondrous laboratory in the vital analysis and synthesis of proteids—as simple as though it was done in vitro in the test-tube.

If it were not for the fact that we can continue to break a peptone into an amino acid, we would all die from our own digestion. It has been proved that a G. pig can be sensitized to eggwhite, by feeding this substance per orum, and as a G. pig is not calculated to digest egg-white enterally, some of it is only partly changed and in this form absorbed, with disastrous results to the animal. What makes such a chronic disease as tuberculosis so different from a more acute infective process, is the fact, that during ages of parasiticism, the bacillus has well learned how to protect itself from our body enzymes. And this is why nature's cure of tuberculosis is largely a local, not a general matter, an infection handled in situ by the invaded cells by means of fibrosis and calcification. etc. The cells recognize that they can do little or nothing against the bacillus, they therefore proceed to wall it off and starve it to death.

Such in brief, is my understanding of Vaughan's theory as elaborated in his recent work on split proteids. Some investigators in tuberculosis seemingly got their ideas of a dead so-called antigen in tuberculosis from the work of Vaughan, though he soon found that his non-poisonous sensitizing group would not immunize. One investigator went so far as to place on the market a so-called vaccine for tuberculosis, which I personally know will neither protect nor cure infected animals.

Devche and Much have carried this work as applied to tuberculosis, a little further. They hydrolise and partly

split the tubercle bacillus by means of lactic acid, obtaining an emulsion which on standing, separates into two parts, a water soluble portion containing small amounts of soluble albumens and fat globules, and the precipitate, which contains most of the albumens and fats of the tubercle bacillus. This first part is apparently tuberculin; it gives the known tuberculin results, and Devche and Much think that it represents the poisons of the tubercle bacillus. The albumens of the second portion, the precipitate, will not kill tuberculous G. pigs and will not protect animals against tubercle bacilli; also it can only sensitize to itself. The neutral fat alone does not produce antibodies, nor will it give reactions in animals treated with old tuberculin; but, however, a very striking result occurs if the neutral fat is mixed with the albumens of the precipitate, when it at once becomes potent to protect animals against tuberculous infections.

The albumens, neutral fats and fatty acids found in the second portion of their emulsion. Devche and Much call! partial antigens, for the reason that partial antibodies corresponding to each one, are found in the blood of tuberculous and tuberculous immune individuals and in the latter, sometimes in large amounts. These investigators have found enormous quantities of partial antibodies in pleural exudates, which is practically proven by the fact that every phthsiotherapist, who has profited by experience, recognizes that such exudates should be left alone, except in the presence of pressure symptoms, and then only partly removed, though personally, I have never been able to see any good results from the

introduction hypodermically of this exudate into the same individual or other patients affected with tuberculosis. Tuberculous patients who are very ill, do not have ancibodies in their blood. Devche and Much claim to have succeeded in immunizing guinea pigs against tuberculosis, by the use of their partial antigens. It remains to be seen if this immunity is more substantial and lasting than that obtained by von Behring, in calves, and Webb, in monkeys, using living bacilli. Certainly the earlier work was very disappointing. Whether or not, Deyche and Much's partial antigens are to furnish us with a more potent weapon against tuberculosis, remains to be seen. Much has recently been employed by the Turkish government to aid in stopping the ravages of tuberculosis among the Jews in Palestine and we should learn the results before long.

One thing makes me very skeptical of the practical utility of the partial antigen work. If nature could have learned to cure tuberculosis by means of antibodies, she would have done it long ago, and not been driven to what seems a purely local defence of building walls about it. No matter how perfect a tuberculo-proteid immunity a tuberculosis patient has, his ultimate salvation depends upon his success in wall building. All the partial antigens, including tuberculin itself, may do good, in as much as they teach the body to tolerate or neutralize the tubercular protein.

Personally, however, I as yet see little light in handling the tubercle bacillus himself after he has once sat down on the job and gone to work. He is armor coated with wax and possesses an enzyme much too potent for us to manage.

Nevertheless it is certain that all this work in protein analysis has already proved itself to be fully justified, in practical results, as well as additions to our knowledge, and will enable medicine to advance with seven-league boots during the next decade or two.

MANAGEMENT OF THE WOMAN AND CHILD DURING THE PUERPERIUM

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(Read before the Las Vegas Medical Society, April 23rd, 1914.)

In addressing the Medical Society on this subject, I do not expect to present anything particularly new or startling but it may be that in talking to you on this subject and detailing the course of treatment which I have tried to carry out in such cases. I may seem in some particulars to be somewhat revolutionary. If I can bring about a full and free discussion of the methods that I have pursued, I will have accomplished my object and I am sure that I will receive great benefit thereby. I shall not make any effort to talk on the pathology of the puerperium, but shall limit myself to the discussion of what is termed a normal period following a normal delivery, taking as a starting point the time immediately after delivery and after everything has been finished concerning the delivery itself.

The first point to be considered in discussing this subject is the posture of

the woman. Every woman after having brought a child into this world should for a period of at least 48 hours, remain prone upon the back; although I am afraid most of you will find this a very hard rule to put into effect, as even trained nurses are inclined to allow patients to turn first to one side and then to the other. After about 48 hours lying upon the back is not necessary and a change of position is a relief and also facilitates the "flow." The only danger that I have been able to ascertain from allowing the patient to turn from side to side would be the possibility of causing a central embolus by introducing air into the uterus. This condition I have never seen and I hope I never shall as it is almost certain to terminate fatally.

REST.

If the accoucher will bear in mind that the woman who has gone through a labor has been doing very hard work for from 3 to 24 hours, or may be longer, he will at once realize the necessity for sleep and rest for the woman immediately after her labor is over. Fortunately most women are anxious to sleep for several hours and when there is no disposition to drowsiness, sleep should be induced, the most harmless methods being used first, as a cup of warm milk or hot cocoa or hot water, and the room darkened and the woman left alone to secure what rest she can. If these methods fail resort must be had to some of the hypnotics, sulfonal, trional, paraldehyde, bromide, and as a last resort, chloral or some of the derivatives of opium.

There is a good rule with reference to nursing the infant that should be impressed upon all parties having any connection whatsoever with the care

of the mother and child, viz.; nurse the baby at 11 p. m. and do not allow the little one in the same room with the mother until 5 a. m. the next morning. This is not only a good practice because of the prolonged rest the mother is able to obtain, but it is also a good measure for the child in that the digestive apparatus has quite a period of rest from its labors and duties. I have had mother and nurse repeatedly say to me that they did not believe that an infant could be made to conform to any such rule, but I have yet to see a case in which the infant after 4 or 5 nights of such a practice failed to accept the inevitable and conform his habits to suit those of the attending parties and be broken in as a good baby.

The cleansing of the woman is one of the things that will require careful attention on the part of the physician. If you are fortunate enough to have a trained nurse on the case, a few general directions will be all that it is necessary to give, but I have made it an invariable rule no matter who was taking care of the case, to instruct the nurse to bathe the vulva and external genitals as little as possible; not after each pad is changed as is so frequently the custom, but only when absolutely essential for the comfort of the patient. One point to be remembered is to always bathe from the vagina to the rectum, not from the rectum to the vagina.

During my service in the Columbia Hospital for Women, it was my good fortune to be connected with the institution at a time when the subject of the kind of bacteria causing the various types of fever during the puerperium was under discussion and the pathologist of the institution, Dr. James Carroll, spent one year in working on this problem and the results were reported by Dr. Henry D. Fry. Their conclusions were about as follows:

First, that the vaginal discharges were inimical to pathogenic organisms.

Second, that febrile conditions coming on before or on the third day were due to streptococcus; fifth day febrile conditions were due to staphylococcus; seventh day due to colon bacillus infection or to a pseudo diphtheria bacillus and ninth day infections were almost invariably gonorrhoeal in origin. These conclusions are not absolutely infallible but I observed the cases upon which this work was done, covering some 200 obstetrical cases, and in almost every case the deductions were found to be correct.

One of the most distressing complications of a normal puerperium are after pains. These are usually more pronounced in multipara than in primapara. The reason for such a condition being more pronounced in multipara all authorities are agreed, is because of a lack of contractile power in a uterus that has contained many foetuses. Whenever these pains become annoying, always ascertain if they are due to retained blood clots within the uterine cavity. To do this grasp the fundus of the uterus firmly with the left hand and make firm, steady pressure in a downward and forward direction, squeezing the uterus with the fingers of the hand while making this pressure. This will dislodge any retained clots and the pain will usually cease. I have usually found a mixture of equal parts of fl. ex. of ergot and fl. ex. of hydrast, caneden, will assist in keeping the uterus empty of clots and in this

way prevent the severe after pains, although, owing to the action of these drugs upon the uterine muscle fibers, it has a tendency to cause slight after pains. If the pains persist after the clots are expelled it will be necessary for the comfort of the patient to give them one of the coal tar products as phenacetin or acetanilid in 3 to 5 grain doses every 3 or 4 hours.

It is very essential that the room which the woman occupies should be well ventilated. The temperature, except during such periods as it is necessary to uncover the woman, should not be above 65 degrees and if the temperature is kept at about this point the woman will thank the attending physician for the comfort she has had during that particular puerperium. visitors should be excluded from the room for a period of at least 3 days and it is much better if they are not allowed to see the patient for the entire 10 days during which most women are content to remain in bed following child birth. Right here I wish to enter my protest to the 10 day period. I would much rather have a patient remain in bed for 3 weeks than for 10 days only, and I trust and hope that physicians generally will strive to keep such cases in bed for a more extended period than the customary 10 days. When the general public learns and realizes that all obstetrical cases are not alike and that some uteri are from 3 to 4 months in involuting and getting back to a normal condition, I believe they will cease to criticise the physician who keeps his patients in bed for from 2 to 3 weeks and in the course of time will condemn the physician who does not pursue such a course.

As stated before, a woman who has

just given birth to a child has been doing hard work for several hours and my belief is that her diet should be regulated according to the amount of work that she has been doing. I do not believe that any physician here would be satisfied with tea and toast after he has been driving the plow for 12 to 14 hours and I do not think that we should expect our patients to gain strength on such a diet. Now do not misunderstand me. I believe that for the first 12 hours, as the woman has not been eating much for some little time, that her diet should be light but at the same time it should be nutritious. After 12 hours on a light diet I instruct my patients to eat whatever they wish, excluding only such articles of diet as they know themselves to be harmful to them wher in their usual state of health. Also I instruct them not to eat pork and beans or ham and cabbage while in bed. I have made it a practice to be very liberal along these lines and I have attributed a great deal of the well being of my patients subsequent to child birth to this very fact. Do not allow your patients to make gourmands out of themselves but insist upon their taking a sufficient amount of nourishment to regain their strength.

THE KIDNEYS AND BOWELS.

These two organs should be looked after with considerable care. I remember very distinctly one case in which for 3 days the mother suffered very acutely because of an acid condition of the urine, she not knowing but what that was an accompaniment of the child birth, made no mention of it and one day the physician noticing the red color of the urine, questioned her closely on this point and she then told him how

she had suffered. This condition, of course, was very promptly relieved and the woman was correspondingly grateful. The bladder should be emptied at least once in every 6 hours. I do not countenance using the catheter unless absolutely necessary, but when it does become necessary for such a procedure, do not hesitate to relieve your patient and make her as comfortable as you can. The bowels should be moved once a day, although occasionally I have allowed patients to go two days without a bowel movement. I do not commend this practice and would advise everyone to have the bowels move at least once a day. After the second day I have usually allowed my patients to use the chamber vessel instead of the bed pan as it is somewhat of a change for them and usually facilitates the flow.

As to the infant, as I stated before, it should be made regular in its habits. Until lactation takes place, the infant should be nursed once every 3 hours. When the flow of milk has become more or less established, the infant should be nursed every 2 hours except from 11 p. m. until 5 a. m. Lactation usually takes place on the third day although there is quite a difference in women in this particular. Some will have an abundance of milk on the second day, others will go as long as 5 days. There is usually a slight febrile disturbance accompanying lactation.

I have given along through this paper various little points as to the care of the child during the puerperium. The little one should be looked after upon each occasion that the physician calls at the house. The cord should be inspected and its condition carefully noted. My treatment of the

cord consists in using dry boracic powder upon a piece of sterilized gauze which is wrapped around the cord and retained in place by the abdominal band. If after 14 days the cord has not dried up and dropped off, it is snipped off with a pair of blunt pointed scissors and the abdomen is then dressed with a dry boracic powder and a silver dollar is placed in a piece of sterilized gauze and fastened within the abdominal binder to retain it in place over the umbilicus. This has a tendency to prevent any hernia upon undue exertion by the child.

The little one's bowels should be carefully watched and if the bowel movements do not clear up after two or three days a small pinch of brown sugar or a teaspoonful of olive oil should be given to facilitate the discharges. The urine should be noted and any tendency to retention should be promptly treated. The little one should be given water at frequent intervals. This is one point that I think should be watched very carefully as most mothers and nurses are inclined to allow the child to go thirsty.

One of the most frequent complications to the child is the jaundice neonatorium. This will usually clear up of its own accord in four or five days. but in order to facilitate the secretion of bile and its excretion, I frequently use one-tenth of a grain doses of calomel for five doses. This occasionally has to be repeated but very seldom. The baby should increase in weight after the first five days and if it does not show an increase after this period it is advisable to look the little one over carefully to ascertain if there is not something organically wrong with it.

As to the visits a physician should pay, I feel that three visits during the 10 days obstetrical period is not enough and it has been my custom to visit the patient within the first 24 hours after labor, then again on the third day, again on the sixth day and again on the tenth day. Upon visiting the patient, the first thing to be looked into is the condition of the lochia. If this is normal satisfy yourself that the uterus is in good shape and well contracted. Inquire about the bowel movements and the urine. If these are normal, inquire about the appetite and the condition as to sleep. If this is good, give any general directions that the conditions may require.

As I stated in the beginning, I had no intention in this paper of going into the pathology of the puerperium and with these few observations I will turn my methods over to you for diseassion.

VINCENT'S ANGINA. By Henri Letord, D. D. S.

Roberts-Banner Bldg., El Paso, Texas. Vincent's Angina is defined in the dictionary as an ulcerating, sometimes membranous, infection of the tonsils; and for a long time little was known of its pathology and perhaps less of its treatment. In late years, especially since Vincent published his investigations of the bacteriology of this infection, considerable attention has been given to this disease by bacteriologists and so now it is well established that the disease is the result of the work of two organisms, a fusiform bacillus and a spirocheta, now generally called Vin-Some observers cent's Spirocheta. have held the opinion that the two organisms are simply two different forms, or stages, of development of one and the same organism. Whether or not this is true is somewhat aside from the present subject, but the fact that these two forms of organisms found together constitute the characteristic diagnostic feature is an important point to be remembered. Either one of these organisms, or at least organisms identical in appearance with either one of these, may be found alone in other conditions, but finding these two together makes the diagnosis sure.

The particular object of this essay is to call attention to the fact that Vincent's Angina is not confined to the tonsils, and that it may attack any of the tissues from the lips back to the pharynx and perhaps even farther internally, and that the gums are very often the seat of an attack. During he past two years, I have seen about a dozen cases in which either the gums alone or the gums and adjacent tissue such as the cheek and tongue were involved. Some of these cases have been acute and some chronic, but all of them have been severe; causing the patient a great deal of pain, inconvenience and loss of time from work. If these cases are properly diagnosed in the beginning and correct treatment applied, they can be quickly controlled; but the treatment must be continued for some time to prevent relapses.

A patient presenting with this disease will complain generally of intense, aching pain of the teeth and jaws. This has been the most prominent and constant symptom in about twelve cases that I have treated. As a rule he will complain also of the constant presence of blood in the mouth. He will also frequently tell you that he has exhausted his knowledge of household reme-

gies without any relief whatever. Upon examination, the first thing noticed is apt to be an awful fetor of the breath that is likely to stagger you if you get a good, strong and unexpected whiff. In some cases this fetor is so strong as to fill the room and you can make a tentative diagnosis without hardly looking at the patient. In other cases this fetor is not nearly so marked, though I have not seen a case in which it was not present to some extent. This odor seems to be a characteristic stench. —once smelled never to be forgotten. There are several causes of fetid breath and prominent among them is pyorrhea, the odor from which is often nauseating, but there is a distinctive feature about the fetor of Vincent's Angina that nothing else seems ever to approach.

Upon looking into the mouth you may expect to see anything from one or two small crater-like ulcers of a gravish color to any number of either single or coalescing ulcers of irregular share and angry look. These ulcers in the mouth seem to start most often at the summit of a papilla of the gum between two teeth and to spread deeply into the tooth-sockets much more rapidly than over the gum surface. These ulcers are covered with a tough, gravish membrane of necrotic tissue which may be easily scraped off, except that it has a tendency to cling about the edges, leaving an intensely red and bleeding surface. After removal a new membrane quickly forms, sometimes in an hour or two. The rapidity with which this membrane forms seems to be an indication of the severity of an attack. The grayish color of the ulcer is often tipged with vellow or green, which is due probably to the accidental presence of saphrophytes.

The onset of this disease is often very sudden and severe. A patient may retire at night apparently in his usual health and awake, after a somewhat restless night, with an excruciating pain in his jaws, with blood oozing from his lips and with a considerable area of gum tissue stripped from the bone by a foul and penetrating ulcer. More often, however, the onset is not so sudden, the disease requiring two or three days to reach such a condition that the patient takes alarm for his future welfare. Whether the onset be rapid or comparatively slow, the ulcers quickly penetrate into the tissue between the teeth, causing extensive destruction so that one, or several, or even all the teeth become very loose and unless the disease is promptly checked, slough out or become so hopelessly damaged as to require extraction. A striking peculiarity of this condition is that there is but very little swelling around the ulcer and that the tissue adjacent to the ulcers appears normal; and as this is an intensely infectious disease, we would expect to find a considerable lymphatic enlargement, while as a matter of fact I have never seen the glands more than slightly enlarged and in some cases not perceptibly so at all.

Some of the attacks of this disease seem, after two or three weeks, to lapse into a sort of chronic condition in which the ulcers disappear and the intensity of the symptoms abate, leaving no signs except some soreness and looseness of the teeth and some pockets about the teeth which resemble somewhat pyorrhea pockets except that the edges instead of being soft, spongy, swollen and moist with more or less

pus in them are hard, tense, dry and turned in as if drawn down by cicatrical tissue, as they probably are. These pockets, which are especially liable to occur near some mechanical irritant about the teeth such as a cavity, a bit of calculus, or an unfinished filling or crown, may harbor the germs of the disease for a long period and serve as a breeding ground from which future and recurring outbreaks may take place. A severe attack seems to go from bad to worse with increase of pain, inability to eat, rise of temperature and spreading of the ulcers until the condition of the patient may become quite alarming; and there is no telling where such a case might end if allowed to progress, but probably like a case of cancrumoris to which it is doubtless close akin, would gather virulence as it went and result in death.

In the treatment of this disease, of course, the general condition, especially the bowels, must receive prompt attention first and then the local condition. Until recently, when I had the good fortune to stumble upon a remedy that has so far proved almost a specific in handling these cases, great difficulty was experienced in getting them under control. Almost every possible antiseptic and stimulating lotion was used as a mouth wash with very unsatisfactory results from all of them. most curative results I had by cleaning the ulcer thoroughly with peroxide of hydrogen on a swab and then painting with tincture of iodine. Even with this treatment the ulcers were often exceedingly and discouragingly slow to yield and the pain remained so severe as often to require an anodyne. About two years ago I was making some tests with sodium perborate when a case of Vincent's Angina presented itself. From what little I could learn about this disease at that time I thought perhaps sodium perborate would be a proper remedy and decided to try it. You cannot imagine how happy I was, after the long and tedious contests I had had with previous cases, to find the course of this one arrested at once and the pain banished as if by magic. The results seemed too good to be true, and not until I had had a similar experience with several cases of my own, and heard the report of the same results in some cases in the hands of my friends, would I believe it. I remember distinctly the second case in which it was used. The patient had neither slept nor eaten for three days so intense was his suffering. usual remedies such as would be applied in stomatitis had been given him without result. Not only were his gums covered all around, above and below but the cheeks, too, were involved. On the left side there was a patch as big as a silver dollar. His mouth was thoroughly washed with sodium perborate solution driven with a compressed air sprayer and he was given some of the powder to use as a mouth wash. When he reported the next day he said that fifteen minutes after leaving the office he was asleep on the street car going back to the Post. From this until the last time I saw him, about a week later, he remained free from pain and the ulcers healed rapidly.

The micro-organismal combination causing the disease has several times been reported as anaerobic, and anaerobic it no doubt it. If so, the action of sodium perborate becomes easily explained. Sodium perborate when added to water, decomposes and liberates peroxide of hydrogen which in turn gives up oxygen that destroys the micro-organisms. Naturally, after the acute symptoms are checked, it is essential, to a complete cure, for a dentist to go thoroughly over all the teeth, removing tartar, sterilizing and filling all carious cavities, and completely removing every rough place that might serve as a shelter for a colony of bacteria.

As a result of the destruction of the tissue between the teeth, pockets are formed which in proportion to their depth remain a constant source of annovance to the sufferer and a constant pick-up for food particles. Unfortunately these pockets cannot be completely eradicated and so they leave the way open for infection about the toothroots, which infection is almost sure to take place sooner or later, and having taken place, to become chronic, and end in a pyorrhea alveolaris which soon ends the tooth. Most of my patients with Vincent's Angina have lost at least one tooth, and some of them have lost several already, and what is worse, will lose more as the alveolar process about some of the teeth was so badly damaged as not long to be able to stand the constant drains of mastication. The patient should continue using a mouth wash made by adding a teaspoonful of sodium perborate to a half glass of water in connection with his usual dental toilet for six months to thoroughly rid himself of the infection, otherwise relapses will probably occur.

FINAL REPORT ON EPIDEMIC OF TYPHUS FEVER AMONG THE NAVAJO INDIANS AT CANONCITO COJO.

Lewis C. Day, M. D., Albuquerque, N. M.

(Completing report as published in New Mexico Medical Journal, May, 1914.—Ed.)

On March 18th I read a paper before the Bernalillo County Medical Society, in which I reported twenty-four cases of typhus fever among the Navajo Indians at Canoncito Cojo. At that time thirteen had recovered, three had died and eight were then sick.

On March 25th I again visited the settlement and found that one more child had died of the disease and that two more cases had developed among those quarantined. One was a young man, who on the 14th visited the camp for the first time so far as I was able to ascertain, for the purpose of acting as pall bearer for one who had died of the disease on that day. I placed him in quarantine on the 15th, then perfectly well so far as I could see, but on the 25th he had a well marked case and had been ill for about five days. The other case was a middle-aged woman who had acted as wet nurse for children whose mothers were too sick to nurse them. Children had nursed her breast when ill with the disease and she had been constantly with these people, yet she was among the last to fall ill. She had a nursing baby of her own and two other small children. These three did not contract the disease.

At this time I learned of another

young man not in quarantine, who was ill. I visited him and found that he was ill with this disease in the midst of a family of twelve other people.

How he had become infected was uncertain. His home was near the now vacant camps in which the disease first appeared. He may have become infected from visiting these camps and he may have visited the quarantine camp before we had our guard to keep visitors away. At any rate he and his twelve associates were immediately taken to our quarantine camp and that day, assisted by Superintendent P. T. Lonergan and Jose Platero, our Indian policeman, we began our war of extermination against the vermin.

We clipped the hair from the heads of every Indian who had had the disease or who was then exposed, removed all their clothing and covered their entire bodies with a mixture of equal parts of coil oil and lard in which there was mixed a considerable quantity of sulphur. New clothing was furnished. The old clothing which was of any value was boiled. Sheep skins which they use for bedding were either dipped in coil oil or a strong solution of bichloride of mercury. Their previous quarters were destroyed by fire and new ones furnished. At this time three patients were in the height of the disease in the semi-delirious typhoid state described in my previous report. The others were nearly well and all except one man were able to come off the cliff on which they were isolated for the cleaning up process. We now had 38 people under quarantine, fifteen of whom had not had the disease. All so far as we knew were free from vermin.

My next visit to the camp was April 13th. No new cases had developed. Even the three children who had slept under the same blanket with their mother while she was ill with the disease, had escaped, as had likewise the family of the young man last discovered and placed in quarantine. His aged father and mother had nursed him from the beginning. Both were more or less feeble, but both had escaped infection.

The sick had all recovered. In fact four days previously the woman so sick at my last visit had attempted to escape from the camp and had gotten about ¼ of a mile away with nearly 75 pounds of bedding and food on her back. I now repeated my previous procedure so far as new or clean clothing was concerned, boiling or sterilizing everything as before, and again covering their bodies with coal oil, lard and sulphur mixture. I now discharged them from quarantine and destroyed every camp in which there had ever been any sickness of this character.

I last heard from the settlement May 11th. No one was sick and there have been no cases since I raised the quarantine April 25th.

The total number of cases was twenty-seven—eleven adults and sixteen children. There were four deaths, two adults and two children. Twelve of these were males and fifteen females.

I have discovered nothing different from my previous report concerning the cause of the disease, except that all cases did not seem to end by crisis, at least some were quite ill for some time following a temperature drop to normal. In fact the young man whom I first placed in quarantine on March 26th had a normal temperature in the morning of the 28th. He had been ill since about the 13th, yet I found him still weak when I raised the quarantine April 15th, while the two other cases still having fever on March 28th were apparently as well as ever on April 15th.

The remarkable escape of the three small children as well as the old man and woman are worthy of note. I believe this may point to the time of infection, being late in the disease and of course after all vermin were destroyed. There were no means of transmission. This theory may be upheld by the fact that the first case was dead before the second case developed. My visits were so far apart because of the distance and bad roads to travel over that my observations were necessarily crude and incomplete.

The source of infection was possibly an Old Mexico Mexican who visited the settlement a short time before the first case. He was ill and lay on some sheep skins belonging to the old woman first taken with the disease. After a few hours he went on—where, no one knows. It is merely a conjecture that he was the source.

Abstracts

Early Diagnosis in Tuberculosis.

R. S. Lavenson, Los Angeles, Cal., (Journal A. M. A., April 18), criticises the neglect on the part of physicians of the early diagnosis of tuberculosis. Having had under observation a number of patients undergoing sanatorium treatment, he was impressed with the frequency with which the diagnosis was made only long after the patient had presented himself to

the physician with suggestive symptoms. In only twelve cases out of a total of sixty-six was the diagnosis made immediately or within a few weeks. In fifty-four it had been delayed from three months to five years. He summarizes the records of the examinations of these fifty-four patients by seventy-two different physicians. In 13.8 per cent neither physical nor sputum examination was made or the temperature taken. In 52.7 per cent only a physical examination was made. 12.8 per cent a physical examination was made and the temperature taken and no more. In 8.3 per cent, the temperature alone was taken; in 4.1 a physical examination was made and the sputum examined but the temperature was not taken. In 5.5 per cent the patient complained of the larynx and had only a laryngeal examination made. One patient had only a sputum examination and in one instance in which the diagnosis was not made, all three methods were employed. There is no doubt, he says, that in a fairly large percentage a competent clinician specialist could detect early tuberculosis by the physical examination alone but he does not think this is true of the average practitioner who, perhaps, cannot be held entirely to blame for his lack of diagnostic skill considering the slight changes that characterize the early stages, but Lavensen holds that he must either perfect himself in physical diagnosis or call in skilled assistance. Moreover in some of the instances there was a lack of thoroughness in the physical examination which was made through the clothing and without instrumental aid. A positive sputum examination establishes the diagnosis but a negative test has not a like significance and Lavenson thinks there should be more laryngological examinations made. In all these regards he advocates reform.

also criticizes the undue neglect of the significance of hemorrhage which is rarely due to any other cause. It is possible in some cases that the physician has recognized the disease but through mistaken kindness or dislike to disturb the patient's mental condition, had not informed him of the facts. Lavenson belives there is no justification for this in any case. The author was himself a victim of tuberculosis and died July 6, 1913, as stated in a note.

Syphilis as a Public Health Question.

H. J. Nichols, Washington, D. C. (Journal A. M. A., May 16, 1914), after remarkng on the advances made in our knowledge of syphilis during the last decade, which he reviews, says that they have come not from the clinic, but from the laboratory. We know now that we have effectual means for checking, if not fully controlling, this disease and popular interest in the matter is increasing. The extreme medical position is, of course, that syphilis should be attacked in the same way as other infectious diseases, namely, by detection and removal of the sources of infection, early diagnosis, isolation, prompt treatment and various methods of protection. This position, however, is attacked by many social reformers. They say that "the medical program is a failure in practice and that it tends to legalize immorality." In answer to this first objection, Nichols says that, from the purely scientific view, we are in a good position to control syphilis, provided we could carry out preventive measures thoroughly. Syphilis, however, is on a different standing from the other chief "The endemic center of the infections. disease is . . . in the irregular sexual life of the race and a direct medical attack on the social side of the problem is out of the question." It will be a long day before a sanitary map of the town will be made with syphilis cases pointed out and placards used for infected houses. The subject of syphilis in its relation to public health is not purely a medical one or merely a question of education and reform. We must find out what we can do as physicians and do the best we can. Nichols gives a number of statistics as regards the prevalence of the disease. Most of these are from hospitals, but the research is now being extended into the general population. Even if we can obtain an accurate knowledge of the prevalence of syphilis in a special class, as, for example, in the Army, we cannot fully solve the problem by repressive measures, but a great deal can be done, and as regards the question of treatment, city governments and hospitals can do a great deal. The position of most hospitals toward syphilis needs revision. Most hospitals refuse to admit syphilities, but at the same time they admit the latent cases and other incurable conditions due to existing syphilis, thus throwing away their chances for doing actual good. With our present sure methods of diagnosis and surer specific remedies a great deal of good can be done by properly directed effort. As regards a standard of cure, he gives that used in the Army, where they have unusual opportunities for following up cases. The Army standard is as follows: "One year without treatment, without any suspicious clinical symptoms, with several negative Wassermann reactions and no positive ones, and at the end of the year a negative provocative Wassermann reaction or negative luctin test." These requirements fulfilled, the case is considered closed. As yet about one hundred have met the conditions out of several thousand altogether, but the proportion is increasing. The follow-up system used in the tuberculosis campaign and in social service and the establishment of night clinics may aid in handling the situation among civilians. prophylaxis some hygienic measures are of slight avail, such as the disuse of the common towel and drinking-cup and a campaign against promiscuous kissing. Medical students are in need of instructions in regard to prevention, as it is a special risk to the medical profession. A more effective measure is along the line of negative eugenics, and that is, the prevention of infection of families by mar-The standard for marriage, in Nichols' opinion, should be the same as that mentioned above as used in the Army. The precise time and place for preventive measures is after contact with infected individuals with the calomel treatment of Metchnikoff. Nichols summarizes his views as follows: "1. The application of Koch's etiologic method for the study of infectious diseases, to syphilis, has greatly increased our knowledge of the disease during the last ten years. 2. A strictly medical campaign against syphilis is neither practicable nor desirable. A modified medical campaign both practical and necessary. 3. The prevalence of the disease is still largely a matter of conjecture, and information on this point is to be obtained largely by Wassermann reaction surveys, carried out by municipal and hospital laboratories. 4. The most hopeful outcome of all the recent work on syphilis is the possibility of early diagnosis and radical cure. This possibility is still largely unrealized on account of lack of facilities in dispensaries and hospitals. 5. Our ideas about the efficiency of treatment and about a standard of cure are much more definite than heretofore, as a result of the application of etiologic tests.

6. Syphilis in most cases is a preventable disease, and this fact is an additional warrant for penalizing those who contract it."

Blood-Pressure in Pneumonia.

A. A. Howell, Philadelphia (Journal A. M. A., April 18), says that the significance of the Gibson pulse-blood-pressure ratio in its relation to prognosis and treatment of pneumonia has been fully shown. This, as stated by its originator, is that so long as the blood-pressure expressed in millimeters of mercury remains well above the pulserate per minute the circulatory condition may be considered satisfactory and the prognosis correspondingly favorable. Should the reverse occur, that is, should the pulse rise above the systolic bloodpressure, the case is serious. There are certain apparent exceptions to the rule, as in the very high pressure of arteriosclerosis and the habitual relaxed circulation of certain persons and some cases occasionally deviating between these extremes. In all these exceptions, however, Gibson's rule, that pressure appreciably below normal in pneumonia is an evil omen, holds true, taking as normal the customart blood-pressure of the individual and not the customary 120 to 130 mm. To make the Gibson pulse-ratio a still more valuable guide Howell urges the attempt to estimate mentally in every case just what the blood-pressure ratio was prior to the onset of the disease in the patient and to this he would add the noting of the auscultatory phases—the so-called cultatory sequence—the sounds heard with the stethoscope placed over the brachial artery below the sphygmomanometer cuff. as the column of mercury is gradually allowed to fall in passing downward from the systolic pressure. "The first sound heard after obliteration of the pulse is a clear-cut tap, and indicates the point of

systolic pressure. As the column of mercury falls other similar taps are heard. These in toto constitute the first phase. A sudden change from taps to succession of murmurs marks the passage of first into second phase. The third phase is instituted on a reappearance of clear tapping sounds, and, as the column of mercury is allowed to gently sink, gives way to a succession of dull, muffled taps-the fourth phase. At the cessation of these sounds the mercury column continues its fall to the zero mark, unaccompanied by auscultatory phenomena. This absence of sound has been called by some the ffth phase." The proper normal allotment of space for each of these phases has been worked out on the percentage basis, rather too elaborately, Howell thinks. We should learn them and accustom ourselves to them rather than devote ourselves too closely to figures, and notice whether they are present or absent, or good or bad, just as you would in taking the sounds of the heart. The second phase is the one most quickly lost and its presence therefore is of good import. It is principally in the general character and duration of a clear tap of the third phase that we get information as to the circulatory efficiency. In pneumonia he takes all clear tapping sounds as of good import and weak muffled sounds as bad, especially if arthythmia is added. Changes in the sequence can occur without changes in the Gibson ratio and this adds to their importance. Noticing them is one of the little things we cannot afford to miss in pneumonia cases.

Palliative Effect of Artificial Pneumothorax in Treatment of Pulmonary Tuberculosis.

Dr. William C. Voorsanger, San Francisco (The Journal A. M. A., May 9, 1914)

reviews literature on the subject of artificial pneumothorax and reports three cases of his own, all different in type, progressive, advanced and hopeless, which were selected for lung compression to relieve the cough and expectoration and not with a hope of arresting it. In the former sense, he thinks, the procedure must be looked on as successful. He therefore adds to the indications which were given for lung compression the following: "Hopelessly advanced cases in which after careful examination it is ascertained that cough and expectoration is being produced from a large cavity in one lung even though the other is badly infiltrated." His cases number fourteen and have been selected from those which, after a fair test, did not respond to other well-tried methods of treatment. All of his cases were, whenever possible, controlled by roentgenograms before operation. All compressions were made by the Forlanini method with 0.5 per cent novocain anesthesia. He believes that artificial pneumothorax can be successfully employed outside of the hospital or sanatorium, if the technic employed is perfect.

Local Anesthesia.

J. J. King, New York (Journal A. M. A., May 30, 1914), describes a method of local anesthesia which he has found most satisfactory for resection of the nasal septum. Half an hour before he begins, the patient takes by mouth 1-150th grain of scopolamin hydromid to allay nervousness and as the therapeutic antagonist to cocain. Then he applies with a cotton wound applicator a 20 per cent solution of cocain hydrochlorid over every part of the mucous membrane of the septum and repeats it immediately. After the second cocain application he makes a similar one

of a 1-1,000 epinephrin solution and following this an injection under the septum perichondrium and periosteum on each side of from 8 to 10 cc. of a sterile salt solution to which 5 minims of a 1:1,000 epinephrin solution has been added immediately before the injection. This completes the anesthesia and infiltrates every portion of the septum membrane, blocks off the nerves, prevents shock and renders the operation practically bloodless. It also aids in elevating the perichondrium from the cartilage and makes the dissection easy. He uses only 5 minims of epinephrin solution because this does not exceed the physiologic dose of the hypodermic injection and he has found it in his experience sufficient to render the field bloodless pithout producing toxic symptoms.

Radium Treatment of Cutaneous Epitheliomas by Single or Massive Doses.

Dr. A. Schuyler Clark, New York (The Journal A. M. A., May 9, 1914) reviews literature on the subject of radium treatment on cutaneous epitheliomas by massive or single doses and reports twentytwo cases of his own. He is convinced that there an infinitely smaller number of recurrences after the single or massive dose method. His exposure varied from twelve or fifteen to twenty-four hours, depending on the depth and nature of the lesion. He gave as long a single exposure as compatible with a return of the included healthy cells to normal, or, at least, a large part of them, this being of considerable importance from a cosmetic point of view. He thinks that radium is an efficient means to attack lesions and that the single or massive dose will prove to be the method of choice, as it is easier to

estimate the single or massive dose because it is a stable remedy emitting a constant amount of rays, which is not the case with Roentgen rays, even with pastiles. Its ease of application, comparative painlessness, even in the inflammatory stage, its harmless appearance and cosmetic results recommend it to the patient.

An Investigation of the Causes of Failure In Cow-pox Vaccination.

Dr. John Nivison Force, Berkeley, Cal. (The Journal A. M. A., May 9, 1914), records an investigation of the causes of the failure in the cow-pox vaccination of persons entering the University of California with no visible evidence of a previous vaccinia. He reports the technic employed, the investigation of the causes of failure under three heads: (1) the development of a uniform technic, (2) investigation of the virus and (3) investigation of alleged immunity against cow-pox. Under 1, the preparation, scarification, application of virus, dressing and subsequent care and the records are given. Under 2, the records of the virus from New York Vaccine Laboratory and the local vaccine are given. Under 3, the tests of immunity are given with the application of the test and a case report. Force concludes that any typical reaction against vaccine is an evidence of immunity, that the technic described is an exact aid to revaccination and that "physicians" certificates of immunity should be based on an observed reaction and not on the failure of two or three vaccinations, unobserved until the fifth day after the insertion. These "failures" may not have been due to immunity but to inert virus."

New and Nonofficial Remedies.

Since publication of New and Nonofficial Remedies, 1914, the following articles have been accepted for inclusion with "N. N. R." Those accepted during the current month are made prominent by the use of capitals:

H. M. Alexander and Co.—Normal Horse Serum; Typhoid Vaccine, Immunizing.

Antiseptic Supply Co.—Causticks; Caustick Applicators; Cupristicks, Stypticks.

Arlington Chemical Co.—ARLCO UR-EASE.

Comar and Cie.—ELECTRARGOL.

Farbwerke Hoechst Co.—Amphotropin; Erepton.

Fairchild Bros. and Foster.—Trypsin.
Franco American Ferment Co.—LACTO-BACILLINE TABLETS; LACTOBACIL-LINE LIQUIDE, CULTURE A; LACTO-BACILLINE LIQUIDE, CULTURE D; LACTOBACILLINE LIQUIDE, INFANT CULTURE; LACTOBACILLINE GLYCO-GENE TABLETS; LACTOBACILLINE (GLYCOGENE LIQUIDE); LACTOBACILLINE MILK TABLETS; LACTOBACILLINE MILK FERMENT; LACTOBACILLINE MILK FERMENT; LACTOBACILLINE SUSPENSION.

Hoffmann-LaRoche Chemical Works.— Thiocol; Syrup Thiocol, Roche; Thiocol Tablets.

Hynson, Westcott and Co.—Phenolsulphonephthalein, H. W. & Co.; Phenolsulphonephthalein Ampules, H. W. and Co.

Merck and Co.-Cerolin.

H. K. Mulford Co.—Acne Serobacterin; Anti-Anthrax Serum, Mulford; Antistreptococcus Serum Scarlatina, Mulford; Coli Serobacterin; CULTURE OF BULGARIAN BACILLUS, MULFORD; Disinfectant Krelos, Mulford; Neisser Serobacterin; Pneumo Serobacterin; Salicylos; Scarlatina Strepto Serobacterin; Staphylo-Serobacterin; Straphylo Acne Serobacterin; Strepto-Serobacterin; Typho-Serobacterin.

Riedel and Co.-New Bornyval.

Reinschild Chemical Co.—Phenolphthalein Agar.

E. R. Squibb and Sons.—Sodium Biphosphate, Squibb; Tetanus Antitoxin, Squibb; TETANUS ANTITOXIN, SQUIBB, 5,000 UNITS.

Wm. R. Hubbert.—Diphtheric Antitoxin, Hubbert. Having been advised that Diphtheric Antitoxin, Hubbert was no longer on the market the Council directed that it be omitted from future editions of New and Nonofficial Remedies.

Riedel and Co.—Hexalet. At the request of the manufacturer the name Hexal in New and Nonofficial Remedies has been changed to Hexalet.

W. A. PUCKNER, Secretary, Council on Pharmacy and Chemistry.

New and Nonofficial Remedies.

Since publication of New and Nonofficial Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies:"

Sodium Biphosphate, Squibb.—This non-proprietary form of sodium acid phosphate has been accepted for inclusion with New and Nonofficial Remedies. E. R. Squibb and Sons, New York (Jour. A. M. A., May 2, 1914, p. 1401).

Normal Horse Serum with Chloroform as a Preservative.—Marketed in vials, each containing 50 cc. H. M. Alexander and Co., Marietta, Pa.

Normal Horse Serum without Preservative.—Marketed in vials, each containing 50 cc. H. M. Alexander and Co., Marietta, Pa. (Jour. A. M. A., May 2, 1914, p. 1401).

Erepton.—A meat product consisting largely of the amino-acids produced by the digestion of meat. Erepton is said to

be useful in cases in which it is necessary to substitute a perfectly digested food for the product of natural digestion in cases of gastric or intestinal indigestion and for the purposes of rectal alimentation. Farbwerke Hoechst Co., New York (Jour. A. M. A., May 16, 1914, p. 1559).

Acne Serobacterin, Mulford.—This is a sensitized acne vaccine. H. K. Mulford Co., Philadelphia, Pa.

Coli Serobacterin, Mulford.—This is a sensitized coli vaccine. H. K. Mulford Co., Philadelphia, Pa.

Neisser Serobacterin, Mulford.—This is a sensitized gonococcic vaccine. H. K. Mulford Co., Philadelphia, Pa.

Pneumo Serobacterin, Mulford.—This is a sensitized pneumococcic vaccine. H. K. Mulford Co., Philadelphia, Pa.

Staphylo Acne Serobacterin, Mulford.— This is a sensitized staphylo acne vaccine. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., May 16, 1914, p. 1559).

New Bornyval.—New bornyval is borneol isovaleryl glycolate, the isovaleryl glycolic acid ester of borneol. Being more resistant to the gastric fluids than bornyval, it passes the stomach unchanged and is said therefore to be less irritating than bornyval. Its properties are similar to those of bornyval and other valerian preparations. New bornyval is an almost tasteless and odorless liquid, insoluble in water. It is also sold in the form of Bornyval Pearls, each containing 4 minims of New Bornyval. Riedel and Co., New York (Jour. A. M. A., May 23, 1914, p. 1637).

Propaganda for Reform.

Valentine's Meat Juice.—Four years ago an examination by the Council on Pharmacy and Chemistry showed that Valentine's Meat Juice was not a meat juice, but had the character of a meat extract instead, while on the basis of the

claim that it was a meat juice extravagant assertions as to its nutritive value were made. The product being a meat extract, was practically devoid of nutrient qualities. As Valentine's Meat Juice is still widely advertised the Council deemed a re-examination important. This re-examination shows that in general it has the composition now as then, and that the same unwarranted claims are still made for it (Jour. A. M. A., May 2, 1914, p. 1419).

Lower's Germen Prescription. - This "consumption cure," hailing from Marion, Ohio, is sold under the claims: "The most Deadly Foe to the Great White Plague-TUBERCULOSIS-Science Has Yet Produced," "it takes from 15 to 30 large bottles of Germen Prescription to remove the tuberculosis poison," each bottle costing the victim two dollars. The composition of the nostrum is purported to be (in bastard Latin): "Herb Menthaepeperitae, Herb Marrubium Vulgarae, Ex Balsanum Tolutonum, Herb Hydrastis Canadensis, Scillae Maratinia, Mentholis, Ex Virginianna Prunus, Ex Capsici Fastiagatum." An examination made in the A. M. A. Chemical Laboratory indicates that whatever therapeutic virtues this pepperminthorehound-cayenne pepper-menthol mixture possesses are due to the 1.83 gm. menthol per 100 cc. which it contained. About the only effect produced by the mixture will be to derange the digestion of the person taking it. (Jour. A. M. A., May 2, 1914, p. 1418).

Pituitary Extract.—The use of pituitary extract as an oxytoxic must be considered in the experimental stage. A large number of cases have been reported in which untoward effects from the use of various pituitary extracts (including pituitrin) were obtained. (Jour. A. M. A., May 2, 1914, p. 1420).

Pancreatin.—Long and Buhleman report that mere traces of hydrochloric acid will destroy the ptyalin of pancreatin, that pancreatin of commerce—which often is not pancreatin but merely the dried pancreas gland—is practically devoid of lipase, the fat digesting ferment, and that its tryptic ferment is likely to be destroyed by the action of the pepsin and hydrochloric acid during its passage through the stomach. (Arch. Int. Med., Feb. 1914, p. 314).

The Okola Laboratory.—The postmaster general has issued a fraud order against the Okola Laboratory, Inc., Rochester, N. Y., which sold a mail order treatment for weak eyes. The "laboratory" advertised that Dr. John L. Corish "an able New York physician" and "an eminent medical man" had discovered a marvelous treatment for affections of the eye by which those who were wearing glasses or who should have been wearing glasses would do without The treatment consisted of three parts. Okola was the name of some tablets proven by the government to consist of baking soda and boric acid. The Okolator was a metal inhaler containing cotton moistened with a volatile liquid. The Okolizers were printed cards giving instructions for rubbing the eyes, etc. (Jour. A. M. A., May 9, 1914, p. 1492).

Pa-pay-ans (Bell) now Bell-ans.—Bell and Company announce that Pa-pay-ans (Bell) is in the future to be known as Bell-ans. An examination of Pa-pay-ans (Bell) made by the Council on Pharmacy and Chemistry having failed to demonstrate the presence of papain, it is probable that the change of name was decided on to escape prosecution for misbranding. (Jour. A. M. A., May 9, 1914, p. 1492).

Bromidia (Battle and Co.).—A report of the Council on Pharmacy and Chemistry points out that while the name suggests

bromid. Bromidia is essentially a chloral preparation. This nostrum illustrates the need of the Council's rule under which recognition is refused to pharmaceutical mixtures whose name does not indicate their most potent ingredients. While the chloral content of Bromidia has been given considerable publicity, yet the preparation is used both by physicians and the public, without due consideration of its potent ingredient, as attested by the fatal results and the habit-formation which have resulted from its use. The Bromidia advertising propaganda first admits the presence of chloral, then it is argued that in Bromidia the evil effects of chloral are eliminated and in the end the impression is left that Bromidia is practically innocuous and may be given even in cases of typhoid and to children. (Jour. A. M. A., May 16, 1914, p. 1573.)

Monte Cristo Rum and Quinin for the Hair.—The government chemists found this preparation to contain ethyl alcohol, wood alcohol and a trace of quinin. The manufacturers were found guilty of adulteration and misbranding the preparation. (Jour. A. M. A., May 16, 1914, p. 1575).

Pepsin Magen Bitters.—The government chemists found this preparation to contain only a trace of pepsin. The preparation was declared misbranded. (Jour. A. M. A., May 16, 1914, p. 1575).

Bavarian Malt Extract.—The government chemists proved that this was not a malt extract coming from Bavaria, but instead was beer. The product was declared misbranded. (Jour. A. M. A., May 16, 1914, p. 1575).

Thiocol Re-admitted to N. N. R.—In 1913 the Council on Pharmacy and Chemistry directed the deletion from New and Nonofficial Remedies of Thiocol and Syrup Thiocol, Roche, because a preparation called Sirolin, containing Thiocol as its

effective component and practically the same as Syrup Thiocol, Roche was being advertised to the public. The Hoffman-LaRoche Chemical Works having furnished assurance that the public exploitation of Sirolin has been discontinued, the Council voted that Thiocol and Syrup Thiocol, Roche be restored to New and Nonofficial Remedies. (Jour. A. M. A., May 23, 1914, p. 1637.)

Antimeningitis Serum.—The untoward or fatal effects sometimes following the use of antimeningitis serum are probably due to the toxic action of the preservative contained in it or to increased intracranial tension due to its administration. The technique of its employment should be improved rather than its use abandoned. The dangers which may arise from its use are not to be feared as much as the disease itself. (Jour. A. M. A., May 23, 1914, p. 1661.)

Liquid Petrolatum or "Russian Mineral Oil."-A report of the Council on Pharmacy and Chemistry points out that petroleum oil was used as a medicine by the ancients and that the product "liquid petrolatum" is now on the market under a host of proprietary names and is official in most pharmacopoeias. It was at one time used in the treatment of tuberculosis and as an adulterant of fats and oils on the assumption that it was assimilable. It is now known to pass the system unchanged and has recently been highly lauded as a particularly harmless laxative in the treatment of habitual constipation. As the U.S. P. definition of liquid petrolatum permits the use of rather widely varying products and as there is some difference of opinion whether a light or a heavy oil is preferable, the Council recommends that physicians desiring the water white, non-fluorescent (Russian) mineral oil use the term petrolatum liquidum grave

or paraffinum liquidum, B. P. if the heavy product preferred by Sir F. Arbuthnot Lane is desired and petrolatum liquidum laeve if the light variety is desired. (Jour. A. M. A., May 30, 1914, p. 1740.)

Cirkulon.—The device "Pulsocon" which Gerald Macauro has exploited widely in England, is sold in this country as "Cirkulon" by the "Cirkulon Institute" of Kansas City, Mo. Gerald Macauro, according to the Associated Press, has been sentenced in France to serve a term of three years' imprisonment on a charge of fraud. (Jour. A. M. A., May 30, 1914, p. 1742.)

Book Reviews

Be we financier, industrial worker, navvy, scavenger, or merely a gentleman, we all suffer to a greater or less degree from the ills which our vocations or avocations engender. Just how to prevent, ameliorate or cure these but partly understood ills, should no longer be a puzzle to the man, employer or physician because a reliable and essentially practical book is soon to appear, under the joint editorship of Dr. George M. Kober of Washington, D. C., and Dr. Wm. C. Hanson of Boston, Mass. Among the contributors are such authorities as Sir Thomas Oliver; Legge (London); Teleky (Vienna); Devoto (Milan); Edsall (Harvard); Alice Hamilton (Chicago); etc., etc.

P. Blakiston's Son & Co., Philadelphia, will publish the volume.



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FAVOR THOSE WHO FAVOR US

The annual meeting of the New Mexico Medical Society will be held in Albuquerque on October 5th, 6th and 7th, 1914.

This is fair week and it is to be hoped that a larger attendance will be had than for some years past.

Reduced rates will be in operation on the railroads and the attractions of the fair added to a particularly interesting program both scientific and social ought to bring out a big crowd. We ask the members to bear the date in mind and make their arrangements accordingly.

Members desiring to present papers at this meeting will confer a favor on the secretary and the chairmen of the various sections as it is desired to issue the completed program promptly.

Remember the date, October fifth, sixth and seventh.

THE CHARITY OF MAN.

From the El Paso Times of June 18th, 1914, we clip the following:

"Charged with being insane, Mrs. Parmelia Bauche of East El Paso was yesterday brought to the county jail by Deputy Sheriff Juan B. Larrazalo. Mrs. Bauche makes the eighth prisoner confined in the insane ward of the prison. Severe mental strain is said to have caused the unfortunate woman to become mentally unbalanced. She was examined by Dr. ———, who pronounced her a dangerous person to be at large."

When will such a blot upon the fair name of the Southwest be stopped? This is done in accordance with the law, in spite of the fact that the medical societies in the states where such laws exist have protested over and over and over again. These laws have been made by politicians who know little about medicine, and who will not heed the protests and suggestions of the medical profession. Insane patients are absolutely helpless and just as worthy of the proper care and treatment as typhoid fever patients. The community would hold up its hands in holy horror if sufferers from typhoid were put in jail charged with the crime of having that disease. Yet with typhoid the patient frequently contracts the disease through gross carelessness on his part, and on that account alone is the means of others being infected and dying. Typhoid fever is certainly no less a crime than is insanity. The prognosis in cases of insanity is very often dubious at best, and their last chance of cure is destroyed when they the thrown into a city jail under the most unfavorable possible mental conditions. These patients should be placed in a hospital under reasonably good care until there is a vacancy in the state institution for them. This would cost less than a dollar a day per patient. Why will not the law makers assembled in the state capitals where such laws are in force make reasonable provision for these unfortunates? Men are supposed to be elected to legislative office on account of special ability in that line, and they should not be forced by public opinion to unwillingly make these just and necessary laws. Their position, in such a matter as this, after it has been called to their attention, should be to lead.

Such treatment of insane patients is a relic of the barbaric Middle Ages, when these people were supposed to be possessed of devils, and were killed, stoned or chained. It is time for such outrages as this to stop. E. C. P.

TEMPERATURE.

"The patient has no temperature today but had some yesterday."

Of course, we know what is meant, but the expression is absolutely incorrect and should never be used. A condition of "no temperature" is an impossible state of affairs, and may mean either normal or subnormal. "Some temperature" or "temperature" would mean fever. These terms are inaccurate and do not convey the meaning as well as the proper ones, "fever," "normal" and "subnormal" temperature. For some time this error has been creeping into use among physicians and

nurses, and has been copied by many laymen. Such incorrect slang is entirely out of place in scientific medicine, and we respectfully suggest the use of the proper words.

E. C. P.

CARBON MONOXID AND CANARIES IN MINES

The United States government has recognized the usefulness of small animals in the detection of poisonous gases in mines as well as in rescue work which calls for the greatest care to prevent harmful consequences. Carbon monoxid, the most toxic of mine gases, is produced in blasting. When large shots are fired, where the ventilation is poor, and the working-faces are too far ahead of the last breakthrough, harmful percentages of carbon monoxid and other poisonous gases may be encountered. Miners frequently go home sick from powder The latter sometimes contains as high as 4 per cent of carbon monoxid while the products of the explosion of guncotton contain many times this proportion. Carbon monoxid is the constituent of after-damp most insidious in its action, most difficult to detect, and responsible for most of the deaths caused by mine explosions. For these reasons it becomes highly desirable to have a practical and sensitive indicator of quantities of carbon monoxid which may be in even the slightest degree harmful to man.

The United States Bureau of Mines has made an elaborate investigation to determine the relative usefulness of various animals and has found canaries and mice to be most suitable, the birds being the more sensitive of the two. They are easily obtainable and become

pets of the men. One of the questions, says The Journal of the American Medical Association, was whether canaries become susceptible to the poison after several or many exposures. The smallest amount of gas which will affect a man is 0.05 per cent. The same percentage produces very slight symptoms in mice. Two-tenths of one per cent. is very dangerous to man. When the proportion of carbon monoxid is 0.15 per cent canaries will show distress usually in from five to twelve minutes, and with 0.2 per cent. of the gas in from two to six minutes. Much longer time is required before distress appears in men, although in the case of some persons the effects, when they do appear, may last for hours. Men cannot stand collapse from carbon monoxid as animals can. After distress and collapse canaries and mice recover quickly if given fresh air. In man, recovery is often a matter of days; and long-standing after-effects are by no means rare. Men may feel distress, especially if they work hard, in the presence of 0.1 per cent or under of carbon monoxid, when animals at rest in their cages do not show it. Sometimes different animals of the same species appear to be affected differently by the same proportion of the gas; hence more than one should be used at a time. Fortunately, no acclimatization of canaries appears to occur, so that these birds do not become less useful or a possible source of danger. Guinea-pigs, on the other hand, appear to become immune.

THE DEATH RATE FOR 1913.

According to a bulletin of the Bureau of the Census, the death-rate of the registration area of the United

States for 1913 was 14.1 per thousand estimated population. In 1912 it was 13.9 in 1911, 14.2. For the years form 1901 to 1905 the average was 16.2; from 1906 to 1910 it was 15.1. We are therefore continuing in improvement, the average for 1911, 1912 and 1913 being 14.06. These are the exact figures as stated in the report of the census bureau. What they mean in actual lives is not indicated except by closer analysis. The decrease from 16.2, the average from 1901 to 1905, to 14.1, the average for 1913, amounts to 13 per cent., or a reduction of one death in every eight. If the same rate had prevailed in 1913 as in the period from 1901 to 1905. there would have been 1,025,446 deaths recorded instead of 890,823, an excess of 134,623.

The largest percentage of decrease was shown in Rhode Island (15.7), followed by New York (12.3), New Jersey (11.2) and Massachusetts (9.6). It seems to be only a peculiar coincidence that these leaders should all be in one section of the entire territory Slight increases which discussed. occurred in some states (Michigan 4.5; New Hampshire, 3, and Indiana, .08) are believed to be due in some cases to increased accuracy of registration. The state with the lowest death-rate is Washington, with 8.5 deaths per thousand population; and then in the following order come Minnesota, 10.4; Utah, 11.0, and Wisconsin and Colorado, 11.5. The doubtful honor of possessing the highest rate falls to New Hampshire with 17.1; North Carolina, 16.8; Marvland, 16.2; Vermont, 15.8; Maine, 15.3, and Rhode Island, 15.0. It seems that in the New England states there occurred most of the higher death-rates and most of the improvements from previous years.

It is significant that the four states in the registration area which have a colored population of over 10 per cent., Kentucky, Maryland, North Carolina and Virginia, should average 15.0, while a group with equal population but fewer colored, Wisconsin, Washington, Vermont and Minnesota averages 11.5.

Among cities of over 100,000 population, Seattle and Spokane lead by far with death-rates of only 8.4 and 8.9 respectively. Portland, Ore., follows with a rate of 9.5, so that this particular corner of the United States by comparision would seem to be more than holding its own. It seems almost obvious that location, climate and character of population are responsible for this low rate. Minneapolis and St. Paul as usual contest for next place with 11.6 and 11. Oakland and Milwaukee following with 12.5 and 12.7. The highest rates occur in Memphis, Tenn., 20.8; Richmond, Va., 20.4; New Orleans, 19.9; Albany, N. Y., 19.8: Baltimore, 18.5: Nashville, Tenn., 17.8; Birmingham, Ala, 17.4; Atlanta, Ga., 17.4, and Washington, D. C. 17.3.

The cause of this high rate in Southern cities has probably often been memtioned and often explained, but we cannot too often point the way to betterment, says *The Journal of the American Medical Association*. In the accompanying table, the significant figures need no explanation.

The arraignment is a startling one, but when comparison is made with previous years, a basis is obtained for hope that progress now started will continue, and much is being done. It is to be

	Death-R 1,00 0	per cent. 1913 as compared th-Rate per with average Population 1901-1905.									
	Total	White (*olored	Total	White	Colored						
Managaria	000										

Increase (+) or

Memphis20	0.8 15.9	28.2	+ 7.2	- 3.6	+23.1
Richmond20	0.4 - 16.7	26.8	-12.8	- 9.7	-15.5
New Orleans1:	9.9 15.6	31.9	11.2	-188	+ 29
Baltimore1	8.5 16.2	31.0	- 1.5	9.0	- 31
Nashville1	7.8 14.7	24.0	-17.2	-13.5	-18.9
Birmingham1	7.4 12.3	25.2		* * * * *	
Atlanta1'	7.4 12.3	25.2	-17.5	16.2	-14.9
Washington1' Average18.	68 14 0	27.09	-15.6	-12.7	-17.3
2110148610.	.00 14.7	21.00		1 7 1 0 0	

noted that in only two instances did the colored rate increase. Recently a conferance was held at the call of the Louisana State Board of Health to consider betterment of hygiene among negroes. Five states and the District of Columbia sent delegates. Eight of the leading negroes of the South were present. Progress has been made and sincere workers are adding impetus to the beginning steps. Another decade should see a more reasonable balance between the rates accorded to the two races.

For those of our readers who are interested in Public Health matters we present below a short list of books on several topics. These lists have been endorsed for general reading by the Sub-committee on Medical Literature of the Council on Health and Public Instruction of the American Medical Association.

Health and Hygiene of Babies and Children:

Burbank—The Training of the Human Plant.

Chapin—Theory and Practice of Infant Feeding.

Coolidge—The Mothers' Manual. Cotton—Care of Children.

Fitz—Problems of Babyhood; building a constitution; forming a character.

Forsyth—Children in Health and Disease.

Hall—Youth: Its Education, Regimen and Hygiene.

Key—The Century of the Child.

Montessori—The Montessori Method.

Oppenheim—The Development of the Child.

Saleeby—Mystery of Life Series. Swift—Mind in the Making.

Warner—The Nervous System of the Child.

Health and Hygiene of Girls:

Bell—Our Teeth: How to Take Care of Them.

Bryce-Laws of Life and Health.

Call—Power Through Repose.

Dodge—A Bundle of Letters to Busy Girls.

Gulick-Mind and Work

King-Rational Living.

Latimer—The Changing Girl.

MacFie—Air and Health.

Mosher—Health and Happiness: A Message to Girls.

Pusey—The Care of the Skin and Hair.

Pyle-Personal Hygiene.

Sadler—The Science of Living and the Art of Keeping Well.

Saleeby—Health, Strength and Happiness.

Smart—What a Mother Should Tell Her Daughter.

Solis-Cohen—Woman.

Health and Hygiene of Women:

Bainbridge—Life's Day.

Clouston—Hygiene of the Mind.

Currier—The Menopause.

Galbraith—Four Epochs of a Woman's Life.

Giles—Menstruation and Its Disorders.

Gordon—The Modern Mother.

Gourand-What Shall We Eat?

Gulick—The Efficient Life.

Hewitt—House-Flies and How They Spread Disease.

Hough and Sedgwick—The Human Mechanism.

Latimer—Girl and Woman

Payot—The Education of the Will.

Saleeby-Woman and Womanhood.

Spaeth—Coming Motherhood.

Walker—Beauty Through Hygic

Walker—Beauty Through Hygiene. Social Hygiene:

Dawson—The Right of the Child to be Well Born.

Ellis-Man and Woman.

Foerster—Marriage and the Sex Problems.

Gorst—The Children of the Nation.

Hall—Adolescence.

Henderson—Education with Reference to Sex.

Irving—Nature's Truths Told to a Little Maid.

Lydston—Diseases of Society and Degeneracy.

Lyttleton—Training of the Young on Laws of Sex.

Morrow—Social Diseases and Marriage.

Saleeby—The Cycle of Life.

Smart—The Mystery of Life Series.

Stephens-Woman and Marriage.

Stewart—American Bad Boys in the Making.

Wile—Sex Education.

NEWS ITEMS.

Doctor S. L. Burton of Albuquerque attended the A. M. A. meeting at Atlantic City.

Doctor W. A. Parvis of Socorro

has gone abroad for several months' study in European clinics.

The Journal offers its heartiest congratulations to the President of the New Mexico Medical Society. May you both live long and prosper.

Dr. Kauffman was recently married in Santa Fe to Miss Can-

delaria, of that city.

Capt. J. O. Walkup, M. D., U. S. A., was killed recently by a lightning stroke while driving his automobile at a rapid speed from Central to Fort Bayard in Grant County. Doctor Walkup will be remembered by those in attendance at our last regular meeting.

Original Articles

OIL-ETHER COLONIC ANAES-THESIA.

W. W. Spargo, M. D., Albuquerque The need of a method of general anaesthesia other than that by inhalation has for certain operations and in certain conditions long been recognized:

To meet such indications Doctor James T. Gwathmey has recently introduced a method of rectal anaesthesia which is simple in technique and apparently not more dangerous than the usual method by inhalation. However, a sufficient number of cases has not been collected to definitely settle this point.

For the benefit of those who may not have, seen Doctor Gwathmey's articles I will briefly review the technique. The day previous to the operation a mild laxative, such as castor oil should be given, the following morning the lower bowel is thoroughly cleased by irrigation, after which the patient should rest for two hours. One hour before the operation from five to ten grains of chloretone, either in the form of a rectal suppository or dissolved in from two to four drams of ether and the same amount of olive oil. should be introduced into the rectum. One half hour previous to the operation from one-eighth to one-fourth of a grain of morphine sulphate with from 1-150 to 1-100 of a grain of atropine should be given hypodermically, according to the condition of the The patient should be placed in a modified Sims position on the left side and the oil-ether mixture introduced through a long rectal tube, taking about one minute for each ounce of solution. Anaesthesia will usually be induced in from fifteen to twenty minutes. After the operation is completed, or at any time, if necessary the solution can be withdrawn through the tube which has remained in situ, another tube is then introduced alongside of the first, the colon is washed out with about a gallon of soapy water, after which three 'or four ounces of olive oil is introduced. followed by from a pint to a quart of cold water which is allowed to remain in the rectum.

With reference to dosage the ordinary healthy adult should receive one ounce for every twenty pounds in weight of a 75 per cent. solution of ether in olive oil. Children under four a 50 per cent solution without any preliminary medication. From four to ten a 55 per cent. to 65 per

cent solution, over fifteen the adult dose, with one-twelfth of a grain of morphine.

I have used the method with satisfactory results in the following cases: Case 1-Male; age 30; weight 135 lbs.—tubercular. Operation—castra-Preliminary medication, morphine one-sixth grain, atropine—1-150 grain, chloretone-5 grains. ounces of a 70 per cent. solution was introduced. Surgical anaesthesia was attained in fifteen minutes. The respiration became somewhat feeble and we experienced a little uneasiness, it being our first case, but no really alarming symptoms developed. operation lasted only fifteen minutes, the rectum was then washed out, and patient regained consciousness shortly after. The usual amount of post anaesthetic nausea and vomiting was present in this case, but no noticeable irritation of the lungs.

Case II—Female: age 50; weight lbs. Operation—perineorraphy and ventral fixation. Preliminary medication, morphine one-eighth grain, atropine—1-150 grain, chloretone—5 grains. Six ounces of a 75 per cent. solution was introduced. Anaesthesia in twenty minutes, sufficient to do the perineorraphy. Laparotomy began ten minutes later, relaxation complete, no untoward symptoms at any time. Duration of anaesthesia three-quarters of an hour. Regained consciousness in one-half of an hour after operation was completed, absence of unpleasant after effects.

Case III—Male: age 30; weight 160 lbs. Operation—Internal appendectomy. Preliminary medication—morphine one-sixth grain, atropine 1-150

grain, chloretone—10 grains. Eight ounces 75 per cent. solution. anaesthesia obtained in twenty min-Operation began ten minutes later. During closure of the wound it became necessary to supplement the anaesthetic with a few whiffs of ether by inhalation on account of protrusion of intestines. The anaesthetic throughout the operation was satisfactory, no respiratory embarrassment at any time. Pulse 72 at end of opera-Regained consciousness within a half hour after completion of same. Vomited once slightly, after operation.

Case IV-Male: age 50; weight 200 Operation cholecystotomy. This case did not receive the proper bowel preparation for which reason the anaesthesia was not entirely satisfactory. The usual prelimary medication was given and eight ounces of a 75 per cent solution introduced. The greater part being expelled before anaesthesia was induced it became necessary to introduce more, eight ounces more in all, but as considerable of this was expelled, it was impossible to say just how much was retained, anaesthesia was sufficiently deep to begin operation in one-half hour, but it was necessary upon three occasions during the operation to give a small amount of ether by inhalation to secure sufficient relaxation. An unforeseen accident happened during the closure of the wound and as the anaesthesia was rather superficial it was necessary to supplement by inhalation to complete the operation.

The partial failure in this case should not be attributed to the method but rather to the lack of proper preliminary preparation. Case V—Female: age 21, weight 100 lbs. Operation—internal Alexander. Preliminary medication, morphine one-eighth grain, atropine 1-150 grain, chloretone 10 grains. Five ounces 75 per cent. solution. Anaesthesia quietly induced in fifteen minutes which was satisfactory in every way, relaxation was complete, no respiratory embarrassment. The usual amount of post anaesthetic vomiting was present.

Case VI—Male: age 55, weight 150. Operation—excision of the glands of the neck. No preliminary bowel preparation. Preliminary medication—morphine 1-4 grain, atropine 1-150 grain, chloretone 10 grains. Eight ounces of a 75 per cent solution, anaesthesia in fifteen minutes, slight stage of excitement. After the operation had lasted about an hour and half, two ounces more were introduced, as the patient began to come out. This was sufficient to maintain surgical anaesthesia until the completion of the operation. No unpleasant after effects.

Case VII—Female: age 50, weight 150. Operation—ventral hernia. Preliminary medication, morphine oneeighth grain, atropine 1-150 grain, chloretone—10 grains. Six ounces of a 75 per cent. solution. Anaesthesia quietly induced in fifteen minutes. Once during the operation on account of protrusion of intestines induced by too superficial plane of anaesthesia an additional ounce was introduced. Aside from some obstruction to respiration caused by dropping back of the tongue, the anaesthesia was perfect. The patient vomited three times after the op-The nausea and vomiting after ether by inhalation for previous operations lasted three days.

Case VIII—Child age 7, weight about 50. 2 1-2 ounces of 50 per cent. solution was injected. After waiting 20 minutes without surgical anaesthesia being induced, ether by inhalation was given.

Case IX—Child age 6, weight 50. Operation for tonsils and adenoids, bowels washed out just before operation. 2 1-2 ounces 60 per cent. solution introduced, part expelled, and 2½ ounces more given. Surgical anaesthesia was not attained. but the anaesthesia was sufficient to perform the operation.

Case X—Female, age 30, weight 130. Preliminary medication—morphine grain ½, atropine 1-150, chloretone grains 10. Seven ounces of the 75 per cent solution was introduced, partly expelled and it was necessary to introduce three ounces more. Anaesthesia in 20 minutes. Complete relaxation, no respiratory embarrassment.

Case XI—Baby, 1 month old, weight 10 lbs. 1-2 ounce of a 50 per cent. solution. Operation for cleft palate. Sufficient anaesthesia was induced to

Cace XII-Male, age 71, weight 125; operation partial gastrectomy with an anterior gastro-enterostomy. Preliminary medication morphine grain 1-6, atropine grain 1-150, chlorotone grains 10. Seven ounces of 75% solution introduced. Surgical anaestehsia attained in 20 minutes. Upon exploring the abdomen, anaesthesia being too superficial, it was supplemented by inhalation, until complete relaxation. The operation lasted 31/2 hours, and it became necessary on two occasions during, also at closure of peritoneum, to give a small amount of ether by inhala-Early in the anaesthesis there was a slight embarrassment of respiration due to obstruction by the tongue occluding the air passages. I doubt if this case would have stood an inhalation anaesthesia for such a long period of time. There was post anaesthetic vomiting in this case.

Case XIII—Male, weight 130; operation interval appendectomy. Usual preliminary medication, $6\frac{1}{2}$ ounces of 75% solution was given. Anaesthesia in 15 minutes; once during the operation it was necessary to give a few whiffs of ether by inhalation. The anaesthesia was satisfactory in every way; duration of operation one hour.

The advantages of the method so far as my limited experience with it as observed, are, that anaesthesia is induced more quietly than by the usual inhalation method, that with a proper dosage a more even plane of anaesthesia will be emaintained. The anaesthetist can give his undivided attention to watching the condition of the patient. There is no accumulation of mucus in the air passages, as is so frequently the case with ether by inhalation. There is less post-anaesthetic nausea and vomiting.

In conclusion a few words of caution. On account of its simplicity an operator might be tempted to dispense with the services of an anaesthetist. This might be overlooked in an emergency if one were not available, but I wish to emphasize that just as much care in watching the condition of the patient is required in this as in any other method. My experience confirms Doctor Gwathmey's who states: "The reflexes remain active and there is a complete absence of stertor and even of puffing so frequently observed

under inhalation anaesthesia. A diminution in the activity of the reflexes or the occurrence of stertor, except in very stout persons, in whom a slight stertor is not necessarily a danger signal—or even a puffing of the lips, is an indication that the narcosis is too profound, and a portion of the fluid should be withdrawn."

THE TREATMENT OF ABORTION

WILLIAM HOWE, M. D., East Las Vegas, New Mexico.

(Read before the Las Vegas Medical Society, East Las Vegas, New Mexico, June 17th, 1914.)

Kelley divides the treatment of abortion into four classes, viz:

I.—Prevention, which is subdivided into a, b, and c; a, being before another pregnancy occurs; b, before symptoms of abortion appear; c, treatment of threatened or imminent abortion:

II.—Treatment during progress of abortion.

III.—After treatment.

IV.—Treatment of the sequellae.

For convenience sake we will discuss the subdivisions separately.

I.—PREVENTION.

(a) Before another pregnancy occurs.

In cases where there have been repeated abortions, the first thing in mind is the question of syphilis with either husband or wife and this should be investigated carefully, and if warranted one or both, put under treatment.

Any disease of the uterus or appendages should be corrected, for instance, hyperplastic endometritis by curetment. A lacerated cervix should be repaired.

If extensive erosion, which does not respond to treatment, or cystic degeneration which can not be properly dissected out, amputate the cervix.

Chronic hypertrophy or subinvolution may be greatly reduced by large vaginal douches of hot water daily in the recumbent posture, followed by glycerine tampons every second day; but, from my own experience and observation of the work of others it has been more satisfactory in the majority of cases to first curette and then follow up with the douche and tampon treatment if indicated.

Displacements and perineal lacerations should be corrected as far as consistent; piles, fissures and fistula-inano should be removed.

Enteroptosis and the general physical condition should be corrected by general hygienic measures, proper exercise and medication, open air and suitable clothing, diet, etc. The condition of the bowels should be attended to and daily evacuation secured

The general health and surroundings should be put in as good a condition as possible.

Anaemia and nervousness should be treated properly and everything done to make the patient comfortable and happy and the mind kept from worry by pleasant thoughts, surroundings and suggestions, occupation and change of scene.

(b) Before symptoms of abortion appear.

With many patients who have previously aborted, some of the preparations of viburnum given for weeks or months at a time as a uterine tonic and sedative have proven very satisfactory in my practice, but with those with a strong tendency to abort, it may become necessary to keep them in bed for several days at a time at the regular expected time of the menses, holding them under viburnum for the uterine sedative effect and perhaps the bromides to lessen the sexual excitability, forbidding all sexual intercourse shortly before, during and immediately following the expected times.

(c) Treatment of threatened or imminent abortion.

When symptoms arise threatening abortion or if it becomes imminent the case should be reviewed and studied from every viewpoint.

The patient must be kept quiet and in bed under the influence of morphine or some other opiate, and viburnum should be pushed. Absolute mental quietude can not be overestimated nor too strongly impressed upon the patient's friends.

Vaginal examinations should be restricted and the use of light vaginal tampons as advised by some of our authors, should be abandoned, as I believe they often prove fatal to the ovum. A much better procedure is to elevate the foot of the bed from 8 to 12 inches; this position reduces the blood pressure of those organs by reducing the influx of blood and emptying the veins.

We should not be too fainthearted and prone to abandon our efforts to prevent abortion, considering the case beyond our control, for we have prevented many abortions by the above procedure, sometimes when the hemor-

rhage had been appalling. I believe it to be as much our duty to bend every effort in the interest of the foetus in utero as it is to snatch the child from the jaws of death during a convulsive seizure and restore it safely to the mother's arms at any time during its-first few years of existence.

II.—Treatment During the progress of abortion.

If in spite of our efforts abortion is going to take place, the treatment may be either expectant or active as the case may demand.

I know of no other condition that opens wider the avenues for discussion, unless it be the question of when, or whether or not, to operate in appendicitis.

The expectant line of treatment is justifiable and right up to a certain time or point, especially with a patient near by and under close observation, but when in the country there is another picture and the time is much shortened.

My observation has been that the majority of men in general practice are too much inclined to wait for days and sometimes weeks for the natural forces to bring about a favorable termiation, assisted perhaps by a little obstetrical tinkering with tampons, repeated examinations, etc. I especially refer to the incomplete abortions and also to those in which we are suspicious of criminal interference.

Instrumental and digital examinations greatly increase the danger of sepsis in abortion as they do in labor at term; as does also the bad habit which some women have of self examination, as well as those done by some other women in attendance During my first five years practice I followed the expectant plan as advised by some of our teachers and some of my older colleagues, and labored several times, under considerable anxiety, with prolonged hemorrhage and some cases of sapremia and sepsis, but for the last ten years my method has been active.

In all cases where it was impossible to prevent an abortion, and where the cervix was opened sufficiently to admit the end of a finger and especially where the foetus had escaped leaving the secundines in utero, my practice has been to give an anaesthetic and remove the uterine contents at once, using the finger as a currette, without the use of any other instrument, tampon or manipulation, as I believe the trained finger makes the best currette at our command, greatly lessening the danger of sapremic and septic sequellae and with gratifying results.

I am sorry that Winkel's teaching, to wait for hemorrhage and fever, still has some advocates, for there are bound to be incomplete and neglected cases come to us from time to time from the hands of incompetent midwives, abortionists, and the self treated, so that the profession must be ready to meet the conditions as they arise.

III.—AFTER TREATMENT.

The patient should be kept in bed for a week or ten days as the conditions may demand.

She should be kept clean by sponging the genitals with an antiseptic and applying sterile napkins as in a case at term.

All douching should be abandoned as useless and rather increasing the

chances of carrying an infection,—especially if left in the hands of untrained and incompetent nurses as is so often times done.

Administer tonics as demanded to build up the vitality and restore the normal quantity of blood for that which was lost.

Before the patient is dismissed it is wise to insure oneself of good involution of the uterus and if necessary institute suitable treatment.

IV.—Treatment of Sequellae.

As sapremia and septicaemia are the most frequent sequellae following abortion we believe they deserve an important place in this discussion.

It is a demonstrated fact that we have no one satisfactory treatment for puerperal infection, for the reason of the vast number of methods being suggested and the various means advocated by as many authors.

It is a difficult task, many times, to determine in the start whether we have a sapremic or a septic condition at hand especially in an incomplete abortion, but finding on examination retained blood and membranous rags hanging from the cervix we should promptly remove the decomposing uterine contents by the use of the finger, as it is much more readily effected than by the currette and with far less danger of breaking down the leucocytic wall which serves to prevent the invasion of deeper structures by opening up new avenues for absorption.

Then follow with an abundant saline douche to flush out the remaining debris, which, if it be only a sapremic condition, will abate the symptoms and lower the fever so there will be no need of any farther local treatment.

There should be a microscopal examination of the contents to know what form of infection we have to deal with, and should the symptoms continue, we may be sure that the deeper structures have been invaded and we have to deal with a septic condition.

Then comes the choice of treatment to follow. I have used the antiseptic douches of carbolic acid and bi-chloride of mercury and abandoned them, as being contra-indicated, useless, and not devoid of danger, and under these circumstances their employment is not rational, inasmuch as the germicidal fluid cannot, without poisoning the patient, possibly penetrate the uterine wall sufficiently deep to reach the bacteria which are giving rise to the symptoms.

I have used the streptococcic serum in a few cases and I thought with some benefit, but Williams, who was chairman of a committee for that purpose, has made an extensive investigation in regard to it and reports that there is no evidence of its therapeutic value, and as far as I can find in the recent literature, it has not given the results we expected and hoped for.

Perhaps my cases belonged to the class that make a spontaneous recovery, and which makes so many of our observers enthusiastic after employing a particular agent in a few successful cases. However I believe we are justified in using it in those cases where we believe it to be indicated.

The line of treatment that has given me the best results is the method advised and practiced by Dr. Ill for the last 15 years, viz:

After cleaning out the uterus and douching with an abundance of sterile

water or saline a soft rubber catheter of large size is perforated several times in the first three inches and inserted into the uterus to the fundus, a clove hitch taken around the catheter with a sterile cord just outside the cervix as a guide that the catheter may not be withdrawn without notice, the uterus is then lightly packed with a ribbon of gauze and when filled the cord is anchored to the gauze just outside the cervix; the vagina is then packed with gauze and another cord embraces the two so that it may not be drawn out by accident. A piece of rubber tubing about 18 inches in length is united to the catheter by a glass joint and by the use of a small funnel at the distal end of the tube, 25 to 50 per cent alcohol is poured in until the tampon is saturated; the treatment is kept up by instilling about two ounces every two hours; the return flow prevented by a pinch cock on the tubing.

The funnel and tubing are placed in a clean towel on the patient's abdomen and held there by a binder; the patient should be placed in a high Fowler position as we believe there is no other surgical condition where it is more indicated and gives more pleasing results.

This method may be carried on in the home of the less fortunately situated, and where no trained nurse is at hand, by supplying a quart of the dilute spirits and a clean two ounce bottle with directions to fill this bottle and pour it into the funnel every two hours.

This treatment is absolutely harmless and the only discomfort to the patient is the first time the solution flows over the perineum.

The only untoward effect we have

seen from its use was in a case in consultation which was thought to be moribund and instead of using the dilute spirits, the case being a desperate one, the absolute strength was instilled and this produced intoxication, however, the patient made a recovery.

The catheter may remain in the uterus five days unless the temperature drops below 101° F. taken per rectum, but as it falls the spirit may be instilled less frequently.

When the temperature has remained below the mark for 24 hours the dressings may be removed.

If there is no improvement observed in the septic condition within 24 hours, we may expect complications beyond the uterine body.

In connection with the above treatment I would advise the application of an ice bag above the pubes with a towel between it and the skin as long as the temperature remains above 101° F.

Support the patient with tonics as Iron, quinine and strychnine, and a liquid nutritious diet, keep the bowels open daily by saline cathartic; much good may be done in severe cases by using saline hypodermoclysis or enteroclysis.

Many authors are advising alcoholic stimulants to be pushed in all cases of septicaemia and it is found that these patients bear it better and freer than do others, so why not apply it direct to the field of invasion?

Extirpation of the uterus has not met with the approval of the majority of our best men and offers but little encouragement; if the infection is confined to the uterus it is hardly justifiable and if it has gone beyond it, it is useless.

In case of pelvic cellulitis, open and drain as soon as fluctuation occurs.

My observation in these cases has been very much like that of others, that we rarely get septicaemia following abortion outside of those produced by criminal intent, by the passing of instruments as bouges, etc., and to what extent the medical profession is responsible for the murder of the unborn is shown by the fact that women often use these instrumental means themselves, and are sufficiently posted to boil or sterilize them before their insertion.

Dr. Bacon estimates from 6 to 10 thousand abortions annually in Chicago and we will have to draw our own conclusions as to what percentage of them are induced.

The way to secure conviction of the crime, is to first prove that the woman was pregnant by the microscopical findings of the currette and that currettage was not performed for chronic endometritis; to prove in the second place that the death resulted from the criminal operation itself and to finally prove that the particular person charged did the operation and even then the punishment of such criminals is always difficult, as popular sympathy is rather with the abortionist and murderer and the witness is more than apt to be an unwilling one.

OPERATIVE TECHNIQUE. S. D. Swope, M. D.,

Deming, N. M.

Operating Room. There should be nothing in the operating room that is not surgically clean.

After each day's operations the floor should be wiped up and all stains removed. All linen and temporary covers removed and stock solutions replaced, drainage tubes and accessories inspected and the floors wiped with a formaldehyde solution, one drachm to two quarts of water.

Instruments at Operation. Knives are boiled but three minutes and are then kept in 5% carbolic acid solution until needed when they are wiped with sterile gauze and placed convenient for operator.

All other instruments are boiled twenty minutes in soda solution and then laid out ready for use.

Should an instrument be needed that has not been previously prepared, it may be boiled two minutes, dipped in alcohol and placed for the operator.

When an instrument is soiled by becoming bloody, it may be wiped with sterile gauze by the first female assistant and returned to the table. If very bloody it may be dipped in 5% carbolic acid in sterilized water solution, and laid convenient to the operator. If an instrument becomes infected by coming in contact with pus or unclean substances, or drops on the floor it must be boiled for three minutes, dipped in alcohol before returning to the operator.

Instruments After Operation. After operation instruments, except knives, are carefully washed in cold, preferably running water. All joints carefully cleaned with a small brush, being careful to remove all blood stains, after which they are boiled in soda solution and dried. All damaged instruments are laid out for repair and others returned to case.

Knives are rinsed in cold water, dipped in hot soda water, dried and put away.

Dressings, Towels, Sponges, Gowns, Caps and Masks. Sterilize all dressings in steam for one hour and dry for twenty minutes. Where vacuum sterilizer is available, sterilize at fifteen pounds pressure for thirty minutes and dry ten minutes. Where above articles are not needed for some time and where the assistants are not well and thoroughly trained, it is best to keep all such articles in covers or retainers made of muslin.

Ligatures and Sutures. Only ligatures and sutures from authenticated producers should be used. In small hospitals, from original packages, sealed. The tubes should be dropped in hot water and removed to an alcohol bath from which the head female nurse removes and opens them as needed. Odds and ends may be preserved sterile and placed in a 5% solution iodine and alcohol, in a closed jar, when they may be used as if taken from a fresh sterile tube.

Silk. Silk is used for serous surfaces, in operations on the stomach and bowels, in securing drainage tubes and in closing wounds, as a purse string in appendectomies.

Catgut, plain. In tying off appendix, tying small veins and arteries and in suturing when not more than six days retention is necessary.

Chromatized Catgut. In all work where retention is required for ten days or more, peritoneum, facia, muscle and ligation of large vessels.

Silver Wire. In holding bones together and in positions where knots are difficult to tie and a self retaining twist is necessary, such as closing tears in mouth of uterus.

Kangaroo Tendon. In tying large pedicles where a non-absorbing or very

slowly absorbing non-irritating material is needed.

Silkworm Gut. In perineal sutures, stay sutures and where non-irritating sutures are needed.

Horse Hair. In closing wounds with continued and buttonhole sutures and as small drains.

Silver Clips. In closing wounds where there is little or no tension, they are easily applied and easily removed.

Preparation of Operators and Assistants. Should take a tub bath the morning of the operation. Before preparing for the operation, all woolen garments should be removed and men dress in sterile duck pants and service muslin, short sleeved sterile gown. Women in a white uniform, waists or gauze vests and sterile service gown.

Preparation of Hands. The hands should be scrubbed for ten minutes in good soap and water. Nails carefully cleaned and hands scrubbed ten minutes more in soap and warm water, rinsed in clear water, dried on a sterile towel and dipped in alcohol. All is now ready for the final preparation after the patient is on the operating table, the staff need only to put on the sterile gloves, leaving cuffs turned down over upper hand. Put on the sterile operating gown with long sleeves or adjustable armlets. Pull up the gloves over sleeve cuff, adjust cap and mask and they are aseptic and ready for final preparation and opera-

Service Gown. Is used while working around the operating room previous to beginning operation. It is clean but not supposed to be sterile. It is all that is necessary for the second female nurse in attendance unless she is re-

quired to take the head nurse's place, then she must put on operating gown and gloves as above. The second nurse need not wear gloves while acting in that capacity.

Assistants. In major operations requiring extensive procedures when time is an important factor, there should be an anæsthetist, two female assistants and two male assistants. In operations of less magnitude but requiring rather extensive work, an anæsthetist, two female and one male assistant. In still smaller operations like a currettage or perineoriphy, an anæsthetist and one female assistant will suffice.

Duties of Anaesthetist. Examine patient before the operation, or have the assurance of a competent person, that the patient has no contraindication for general anæsthesia. Adjust the position of the patient and give his whole time to the administration of the anæsthetic and the care of the patient. To answer such questions relative to the condition of the patient as may be required by the operator. Acquaint the operator with any condition arising which he deems necessary for the operator to know and make a record of the time the anæsthetization was begun, how the patient took the agent, pulse at beginning and end of anæsthesia, time agent was employed, name of agent and amount given, time operation was begun and when closure was completed.

Duties of Female Assistants. First female assistant has general supervision over operating room and preparation of dressings, gowns and instruments. She receives her instruction from the operator and the first male

assistant. She has charge of the needles, sutures, ligatures, drainage tubes and dressings. She must be sterile until the wound is closed. The second female assistant looks after the sterilizer, assists assistants to gowns. cap and mask, brings in instruments and attends first female and both male assistants when required. She is clean but not sterile. She must not touch an instrument, dressing or gown with any part of her body or garments. She is to pick up instruments that drop or become soiled, resterilize them and return with hooks or forceps. She is to wipe up any mess, remove soiled towels and when not otherwise engaged, remains at attention. She may make herself sterile by putting on sterile gown, dipping her hands in alcohol and putting on rubber gloves.

First Male Assistant. Assists the anæsthetist and superintends preparation of patient. Places sterile towels over patient, looks after instruments and has everything in readiness for operator. He should anticipate the wants of the operator and be ready with sponges, retractor and hæmostat when needed. He assists in ligating vessels and tying ligatures when inconvenient to operator or when operator is otherwise employed, goes to the assistance of the anæsthetist when necessary and assists in closing the wound. If he should become nonsterile he should relinquish his place to the second male assistant until he can become sterile and return to his duties. He must be prepared to give intra-venous salt solution and even take the place of the operator in emergencies.

Second Male Assistant. Attends to

placing patient on the table, assists in the preparation of patient and applies cleansing fluids and antiseptics. He sponges the wound, when operator and first assistant are employed, and looks after instruments; sees that dressings, ligatures and sutures are ready. He holds retractors when needed, prepares normal salt solution and helps first assistant to give when necessary. He takes place of first assistant when first assistant is out of commission for any reason. With first assistant, closes the wound and removes patient to room or carriage.

Preparation of Patient. The patient has a light supper at six p. m. and is given an ounce of castor oil at eight. A tub bath if practical and if not a sponge bath. The field of operation should be shaved and carefully washed with mild soap and water but no pad or dressing is applied. If the bowels have not moved freely by the next morning, an enema of soap and water should be given. Twenty minutes before the operation, a sixth of a grain of morphine and one hundredth of a grain of atropine are given. The patient walks to the operating room when possible and as soon as the anæsthetic is begun, the preparation is begun also. The patient is strapped about the knees with a wide web surcingle and the arms are held by wrist bands, held in place by a belt about the table, field of operation is sponged over with a one to one thousand benzine and iodine solution which should not be allowed to run down under the patient or to accumulate in the folds of the skin. After this is carefully dried, the field of operation and for some distance around, is sponged with one-half

strength Churchill's tincture of iodine in alcohol. Aseptic towels are pinned about the field and the operation is begun as soon as the surgical anaeschesia is complete.

After Care. The patient is put to bed in warm sheets with warm blankets covering. The nurse takes charge and the surgeon gives his further directions to suit the case in point. Whether the patient is to lie prone, be bolstered up with pillows or be supported by a buttox sling, depends upon the individual case.

Care of Gloves. Boil for ten minutes then put in bichloride solution 4 c.c. sat. sol. to one gal. of water. After operation rinse in clear water, dry, mend holes, powder and lay away in box.

Abstracts

Urochromogen Test.

J. Metzger and H. S. Watson, Tucson, Ariz. (Journal A. M. A., June 13, 1914), give their experience with the Weisz urochromogen reaction in the urine as a prog-They quotenostic sign in tuberculosis. from Heflobower who first called attention to it in this country and who found it more reliable in these cases than the diazo test. Their experience covers two years with 113 patients. The test is described as follows: "Into each of two small test tubes is put 1 c.c. of urine, and 2 c.c. of distilled water are added; now, to one tube which is to be tested for urochromogen, three drops of 1:1,000 solution of potassium permanganate are added. The appearance of the faintest yellow color shows the presence of prochromogen and is easily detected by comparing with the control tube, to which

no potassium permanganate is added. The test is read positive, however, only when the solution stays clear." They give a detailed analysis of their observations with the use of the reaction according to the stage of the disease and say that "in the light of our experience with the urochromogen reaction, in these patients, it appears to us that the following statements seem at the present time permissible: 1. The presence of a urochromogen reaction in the urine of a patient sick with pulmonary tuberculesis is for the time being of unfavorable prognostic import. 2. The persistent presence of a urochromogen reaction in the urine, in spite of proper treatment, probably means a hopeless prognosis. 3. Its absence is generally, though not invariably (regardless of how sick the patient seems), of good prognostic import. 4. Its prompt and continued disappearanc soon after treatment is instituted, in a patient who showed it before treatment, so far as our experience goes, is a favorable prognostic sign; but it will take several years' observation of these particular patients to determine this point conclusively. 5. Finally, it is not an invariable guide to prognosis, but in the majority of cases is of much value, and as all prognoses must be good, bad or doubtful, it will, if judiciously used, help materially to reduce the number in the doubtful class."

Puerperal Sepsis.

J. C. Hirst, Philadelphia (Journal A. M. A., June 13, 1914), remarks that it is evident that not every case of fever in the puerperal period is of septic origin and it should be remembered also that there are two varieties of sepsis, sapremia, due to saprophytic infection and sep-

ticemia due to actual bacterial invasion, usually streptococcic and frequently invading directly the blood current. It is the latter that he specially discusses, as the former yields promptly to disinfection. Septicemia is far the more dangerous and less easy to diagnose. The general symptoms are chills, rapidly rising temperature and pulse and physical depression out of proportion to the other symptoms. The local symptoms are foul discharge, which is sometimes absent, reddened and edematous labia, false membrane formation and a subinvoluted and tender uterus. The pelvic exudate is usually late when it occurs. Leucocyte-counts are usually higher than in any other form of fever in the puerperium, and cultures properly taken with the strictest aseptic technic are often of great value. The prophylactic measures, strict asepsis observed by both physician and nurse, are given in detail. The first curative step is local disinfection of the genital canal erroneously spoken of as curretting, the method of which is described minutely. It should not be done with the patient in bed but on a table (an ordinary kitchen table will suffice), and an anesthetic is not necessary. Careful cleansing of the parts followed by a 1:4,000 mercuric chlorid douche precedes and follows the cleansing of the uterine cavity. If the temperature does not subside or should rise again, intra-uterine douching alone is advised and the best solution is 2 drams of tineture of iodin, 8 ounces of 95 per cent alcohol, and sterile water enough to make 2 quarts. Once daily is sufficient, and the two-way catheter should have ample provision for return flow. There is only one contraindication to this treatment, that is, phlebitis, but it is not always possible to tell

risk. If a sharp rise in temperature follows the disinfection, further local treatment should not be countenanced. A routine use of vaginal uterine douches, purely as a preventive of infection and with an absence of symptoms specially calling for them, is not recommended. An easily digested, largely liquid diet should be given in large quantities and Hirst advises alcoholic stimulation as far as tolerated. Other stimulants are often needed for the heart. but a pulse under 110 does not ordinarily require stimulation. Artificial leucocytosis is theoretically beneficial, but Hirst is not enthusiastic as regards the benefit of a fixation abscess. Enteroclysis is also mentioned as sometimes worth a trial. Serum treatment is mentioned as sometimes giving beneficial results when used early and in sufficient doses. The serum must be fresh; it will not stand long transportation and it is also expensive. Sometimes a daily transfusion of normal human blood-serum from a healthy donor seems to have given benefit and is worth trying when antistreptococcic serum fails. The use of bacterins has been less satisfactory, and colloidal silver, Hirst thinks, is of doubtful utility, though as an unction it is harmless. As regards surgical treatment, he says every physician should be ready to give it if needed. Continual septic symptoms plus an abdominal mass, palpable above the symphysis or Poupart's ligament call for abdominal section. This abdominal mass almost always means a cornual abscess pointing toward the peritoneum, and he emphasizes the advisability of operation in these cases. Without operation the patients are doomed; but with it and with proper drainage (which is the main factor in success) 90 per cent of them can be saved. Phlegmasia alba dolens is mentioned as a complication, and

its treatment noticed. Its greatest danger is pulmenary embolism, which is increased by early activity or massage, and this should never be used.

Compound Fractures.

W. L. Estes, Bethlehem, Pa. (Journal A. M. A., June 13, 1914), bases his remarks on the subject of compound fractures of the extremities on the following postulates: "1. In civil practice a compound fracture is always not only a solution of the continuity of a bone, but also a lacerated wound of the soft tissues in continuity from the periosteum to, and including the skin. 2. Violence necessary to produce a compound fracture of the bones of an extremity must be very great; hence the traumatism is extensive. Commonly the bone is comminuted and the laceration of the soft tissues very severe. 3. Compound fractures are practically always infected wounds. 4. The management of these injuries must include the treatment of a fractured bone and the treatment of a more or less infected lacerated wound of the soft tissues of the same area." The general condition of the patient as well as the injury must be considered and the treatment should be adapted to the circumstances of each case. Stimulants. exclusive of alcohol, and analgesics are needed as well as the control of hemorrhage. Estes advises the avoidance of tourniquets if possible. Elastic constriction is better and if tourniquets are used it should be at some distance from the injury. The wound must be protected aseptically and great care used to prevent infection by handling, etc. No attempt should be made to set the bone at this time. Careful fixation in the position assumed by the injured limb should be employed unless it is clear that the ends of

the fragments are so placed as to do damage. The first consideration of the surgeon should be what is best for the patient, taking into account what is best for his individuality, circumstances and occupation and what treatment will insure the least disability and give the best functional result; the constitution and environment have very important bearings. compound fracture is almost always an infected wound, and Estes emphasizes the value of iodin for disinfecting soiled skin. Iodin is effective only when on a dry skin and hence it should be cleansed with benzin or ether and carefully dried. The nature of the required operation is first to be considered. Amputation is indicated if there is three-quarters of the periphery over the fracture damaged so that it is liable to slough and the muscular tissues below are badly lacerated or comminuted. If there has been a circular or annular pressure on the whole periphery of the limb, or if the bones are comminuted or loose or have lost their periosteum so that practically 3 inches of the shaft is destroyed toether with skin or muscle laceration, this also indicates amputation. The final condition of the limb is also important. Sometimes a limb can be saved which would be useless and often in the way, and the patient might prefer amputation. Conservation is sometimes more hazardous than sacrificing a part. If conservation is decided on, however, thorough cleansing and disinfection must be done and an extension apparatus is often very useful for this purpose. As little direct manual manipulation as possible is advised. Direct fixation of the fragments is always best, and a rigid bone splint or plate is better than wiring. Certain metals are more or less bactericidal, and since 1886 Estes has used a Wessel silver plate

and Wessel silver pegs to fasten the plate to the fragments. Vascular implantations and anastomoses are impracticable in these cases but drainage is all important and it should be done in such a way as to avoid all tension and harmful pressure in the wound. When all those things are provided for a masse dressing of dry absorbent material should be applied and should be left on for several weeks, and over all a gypsum splint with flexible strips worked into it should be placed so as to give support and elasticity to the dressing. When the dressings are removed it is his custom to remove the pegs and the plate if the wound is open to permit it, otherwise it can be left as it does not cause irritation. An analysis is given of fiftyone cases of compound fractures, and the results as regards disability, etc., are reported.

New and Non-Official Remedies.

Since publication of New and Nonofficial Remedies, 1914, the following articles have been accepted for inclusion with "N. N. R." Those accepted during the current month are made prominent by the use of capitals.

H. M. Alexander and Co.—Normal Horse Serum; Typhoid Vaccine, Immunizing.

Antiseptic Supply Co.—Causticks; Caustick Applicators; Cupristicks; Stypticks; STYPSTICK APPLICATORS, ALUM 75%.

Arlington Chemical Co.—Arlco Urease. Comar and Cie.—Electrargol; ELEC-TRARGOL FOR INJECTION 10 Cc. AM-POULES.

Farbwerke Hoechst Co.—Amphotropin; Erepton.

Fairchild Bros. and Foster-Trypsin.

Franco-American Ferment Co.—Lactobacilline Tablets; Lactobacilline Liquide; Culture A; Lactobacilline Liquide, Culture D; Lactobacilline Liquide, Infant Culture; Lactobacilline Glycogene Tablets; Lactobacilline Milk Tablets; Lactobacilline Milk Ferment; Lactobaciline Suspension.

Hoffmann-LaRoche Chemical Works— Thiocol; Syrup Thiocol, Roche; Thiocol Tablets.

Hynson, Westcott and Co.—Phenolsul-phonephthalein, H. W. and Co.; Phenolsul-phonephthalein Ampules, H. W. and Co. UREASE-DUNNING.

Merck and Co.-Cerolin.

H. K. Mulford Co.—Aene Serobacterin; Anti-Anthrax Serum, Mulford; Antistreptococcus Serum Scarlatina, Mulford; Coli Serobacterin; Culture of Bulgarian Bacillus, Mulford; Disinfectant Krelos, Mulford; Neisser Serobacterin; Pneumo Serobacterin; Salicylos; Scarlatina Strepto Serobacterin; Staphylo Serobacterin; Staphylo Aene Serobacterin; Strepto Serobacterin; Typho Serobacterin.

Riedel and Co.-New Bornyval.

Reinschild Chemical Co.—Phenolphthalein Agar.

E. R. Squibb and Sons—Sodium Biphosphate, Squibb; Tetanus Antitoxin, Squibb; Tetanus Autitoxin, Squibb, 5,000 Units.

W. A. PUCKNER, Secretary, Council on Pharmacy and Chemistry.

Since publication of New and Nonofficial Remedies. 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with New and Nonofficial Remedies."

Electrargol.—Electrargol is a colloidal solution of silver, containing silver, equivalent to 0.25 per cent metallic silver. It is

said to be useful in febrile diseases, even in those which are not of a septic character. It is also used externally in inflammatory conditions. For subcutaneous, intramuscular or intravenous injections Electrargol is supplied as Electrargol for Injection in ampoules containing 5 Cc. For external use electrargol is supplied as Electrargol for Surgical Use in bottles containing 50 Cc. (Jour. A. M. A., June 6, 1914, p. 1808).

Refined and Concentrated Tetanus Antitoxin.—Marketed in packages containing 5,000 units (curative dose) put up in syringe containers. E. R. Squibb and Sons, New York (Jour. A. M. A., June 13, 1914, p. 1890).

Culture of Bulgarian Bacillus, Mulford.—A pure culture in tubes of the Bacillus Bulgaricus. It is designed for internal administration for the purpose of establishing lactic acid-producing bacilli in the intestines and for external use. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., June 13, 1914, p. 1890).

Lactobacilline Tablets.—A pure culture of the Bacillus bulgaricus. These tablets give rise to the production of considerable quantities of lactic acid, which tends to restrain the growth of putrefactive organisms in the intestines. Franco-American Ferment Co., New York (Jour. A. M. A., June 13, 1914, p. 1890).

Lactobacilline Liquide, Culture A.—A pure culture in tubes of the Bacillus bulgaricus grown in a neutralized sugar bouillon, each tube containing from 5 to 6 Cc. Its actions and uses are the same as those of Lactobacilline Tablets. Franco-American Ferment Co., New York. Jour. A. M. A., June, 13, 1914, p. 1891).

Lactobacilline Liquide, Culture D.—A pure culture in tubes of the Bacillus bul-

garicus grown in a neutralized bouillon. Its action and uses are the same as those of Lactobacilline Tablets. Marketed as Lactobacilline Liquide, Culture D., Small containing 5 Cc., and Lactobacilline Liquide, Culture D., Large containing 16 Cc. in each tube. Franco-American Ferment Co., New York (Jour. A. M. A., June 13, 1914, p. 1891).

Lactobacilline Liquide, Infant's Culture.

A pure culture in tubes of the Bacillus bulgaricus in a whey medium. It is employed in the treatment of diarrhea or dysentery in nursing infants or young children. Franco-American Ferment Co., New York (Jour. A. M. A., June 13, 1914, P. 1891).

Lactobacilline Glycogene Tablets.—Tablets containing pure cultures of the Bacillus bulgaricus and the Glycobacter peptolyticus. The Glycobacter peptolyticus transforms into sugar the amylaceous substances in the diet, thereby furnishing a pabulum for the B. bulgaricus, which in turn transforms the sugar into lactic acid. These tablets are designed for the prevention and treatment of intestinal diseases. Franco-American Ferment Co.. New York (Jour. A. M. A., June 13, 1914, p. 1891).

Lactobacilline Milk Tablets.—Tablets containing pure cultures of the Bacillus bulgaricus and Bacillus paralacticus. These tablets are used in the preparation of scientifically soured milk. Franco-American Ferment Co., New York (Jour. A. M. A., June 13, 1914, p. 1891).

Lactobacilline Suspension.—A pure culture in tubes of the Bacillus bulgaricus grown in a neutralized bouillon medium. This culture tends to inhibit the growth of deodorant, putrefactive and pathogenic organisms and is used externally in various suppurative conditions. Marketed as

Lactobacilline Suspension, containing 5 Cc. and Lactobacilline Suspension, Surgical, containing 20 Cc. in each tube. Franco-American Ferment Co., New York (Jour. A. M. A., June 13, 1914, p. 1891).

Lactobacilline Milk Ferment.—A pure culture in tubes of the Bacillus bulgaricus and Bacillus paralacticus. Its actions and uses are the same as those of Lactobacilline Milk Tablets. Franco-American Ferment Co., New York (Jour. A. M. A., June 13, 1914, p. 1891).

Propaganda for Reform.

Scopolamin-Morphin Anesthesia.—Mc-Clure's Magazine for June contains a sensational account of the use of scopolamin-morphin in anesthesia as used by Kromg and Gauss at Frieburg. In America the scopolamin-morphin anesthesia has received little attention. It is far from safe and can be carried out only in hospitals. Morphin and scopolamin should not be used in fixed proportions. (Jour. A. M. A., June 6, 1914, p. 1815 and 1829).

Glyco-Heroin, Smith .- A report of the Council on Pharmacy and Chemistry explains that Glyco-Heroin, Smith, although containing 1-16 grain heroin to the teaspoonful, is exploited in a way to encourage self-drugging by the layman. The advertising matter suggests the administration of Glyco-Heroin, Smith to children and much of it has contained the evident falsehood that this heroin mixture does not produce narcotism or habituation. The possibility of habit formation should be sufficient to induce the thoughtful physician to avoid the use of Glyco-Herotn, Smith (Jour. A. M. A., June 6, 1914, p. 1826).

Wine of Cardui.—The Chattanooga Medicine Company claims that no more alcohol is used in Wine of Cardui than is needed to preserve it and that it cannot be used as a beverage. In view of this the terms "booze" and "tipple" cannot be applied to the preparation (Jour. A. M. A., June 6, 1914, p. 1827).

Cystogen.—At a meeting of physicians recently, the question was asked: Why is Cystogen, which is just plain hexamethylenamin, not recognized by the Council on Pharmacy and Chemistry? The answer is simple: Because the therapeutically cally suggestive title as well as the method of exploitation encourage its indiscriminate and ill-advised use, both by the medical profession and the public (Jour. Mo. State Med. Assn., June, 1914, p. 473).

Buffalo Lithia Water.-The fallacy that diseases are due to uric acid and the fallacy that lithium would eliminate the uric acid has made mineral waters highly profitable—even when lithium was present only in infinitesmal amounts. One of the most widely used "lithia waters" was Buffalo Lithia Water, later called Buffalo Lithia Springs Water which has been declared misbranded by the Federal Courts because it was shown to contain less lithia than does Potomac river water and that a person would have to drink 150,000 to 225,000 gallons of the water to obtain an ordinary dose of lithia. The testimonials certifying to the high efficiency of Buffalo Lithia Water and its superiority to lithium compounds given in the past by physicians eminent in their profession, certify to the unreliability of clinical observations (Jour. A. M. A., June 13, 1914, p. 1909).

The Absorption of Iron.—The belief that organic compounds of iron were superior to inorganic iron salts arose before it was known that the bowel forms the most important channel for the excretion of this clement, whence the failure to find an in-

crease in the amount of iron eliminated with the urine by means of the kidneysafter ingestion of the element in some form or other was taken as an indication that it had not been absorbed. Today it is known that iron can be absorbed and excreted by the intestinal wall. Experiments have demonstrated that both inorganic and organic iron can be absorbed and satisfactorily carry out the purposes for which iron is administered (Jour. A. M. A., June 13, 1914, p. 1913).

Prophylaxis of Tetanus.—The following procedure is advised: Remove every particle of foreign matter from the wound. Dry the wound and treat every part with iodin or cauterize it with a 25 per cent phenol solution and apply a wet pack saturated with boric acid solution or alcohol. Inject as soon as possible, intravenously or subcutaneously, 1,500 units of antitetanic serum and repeat the injections if indications of possible tetanus arise. In no case close the wound, but allow it to heal by granulation (Jour. A. M. A., June 20, 1914, p. 1964 and 1971).

Beef, Wine and Coca.—This preparation, sold by Sutliff, Case and Co., Peoria, Ill., was claimed to contain about 15 per cent. alcohol and 1-5 of a grain of cocain to the fluidounce. It was found to contain 23.75 per cent of alcohol by the federal authorities and accordingly declared misbranded by the courts (Jour. A. M. A., June 20, 1914, p. 1981).

Malt-Nutrine—This product of the Anheuser-Bunch Brewing Association was declared misbranded by the government authorities because the label claimed that it was a highly concentrated extract of malt, which was untrue. Malt Nutrine was found to contain 1.6 per cent alcohol and extravagant therapeutic claims were made

for it (Jour. A. M. A., June 20, 1914, p. 1981).

Manadnock Lithia Water.—While extravagant curative claims were made for this "lithia water" examination showed it to contain only traces of lithia and hence it was declared misbranded under the Food and Drugs Act (Jour. A. M. A., June 30, 1914, p. 1981).

Buckhorn Lithia Water.—This water was declared misbranded by the federal authorities because false curative claims were made for it and because it did not contain enough lithia to be entitled to its name. (Jour. A. M. A., June 30, 1914, p. 1981.)

Sun-Ray Sparking Water.—While represented to the "the world's purest water," it was water to which sodium chloride, sodium bicarbonate and carbon dioxid had been added. Accordingly the company which sold the water was found guilty of misbranding under the Food and Drugs Act. (Jour. A.M. A., June 30, 1914, p. 1981.)

Hicema Mineral Water.—This was declared misbranded because it was not a natural mineral water as claimed. (Jour. A. M. A., June 20, 1914, p. 1982.)

Liquid Altolene.—This is a light variety of liquid petrolatum marketed as a proprietary medicine, exploited in an abjectionable manner and with more or less misleading claims. It is said to come from Russia and differs from American products in being entirely non-fluorescent—an immaterial difference. (Jour. A. M. A., June 27, 1914, p. 2048.)

Raymond's Pectoral Plasters.—These are exploited untruthfully as "positive cures" for whooping cough, bronchitis, etc. (Jour. A. M. A., June 20, 1914, p. 1982.)

Book Reviews

Practical Therapeutics

PRACTICAL THERAPEUTICS, Including Materia Medica and Prescription Writing, With a Description of the Most Important New and Nonofficial Remedies Passed upon by the Council on Pharmacy and Chemistry of the American Medical Association. By Daniel M. Hoyt, M. D., formerly Instructor in Therapeutics, University of Pennsylvania; Fellow of the College of Physicians; Assistant Physician to the Philadelphia General Hospital. Second edition, revised and rewritten. C. V. Mosby Company, St. Louis, 1914. Price \$5.00_

The first part of the book is arranged according to the physiological actions and therapeutic uses of drugs, which are concisely stated and available for quick reference. There is a valuable chapter on Proprietary Medicines and Dispensing. The second part deals with new and non-official remedies, taken up alphabetically. The third part is an index of drugs giving in brief their source, description, preparations, doses and uses. Vaccines and sera receive due consideration. The book is practical and worthy of a place in a medical library.

E. C. P.

Progressive Medicine.

PROGRESSIVE MEDICINE, A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., assisted by Leighton F. Appleman, M. D. Volume 11, June, 1914. Hernia, by William B. Coley, M. D.; Surgery of the Abdomen, Exclusive of

Hernia, by John C. A. Gerster, M. D.; Gynecology, by John G. Clark, M. D.; Diseases of the Blood, Diathetic and Metabolic Diseases, Diseases of the Thyroid Gland, Spleen, Nutrition, and the Lymphatic System, by Dr. Alfred Stengle, M. D.

Dr. Coley reviews very thoroughly the literature upon the varied herniae. Special attention has been given to the technique of closing femoral hernia. Included in this article is the surgery of the testis as related to hernia. It is well compiled, practically presented, and the chapter concludes with a presentation of the rare forms of herniae. The next chapter is devoted to the Surgery of the Abdomen, Exclusive of Hernia, presented by Dr. Gerster. This department opens with the presentation of a resume of the literature relating generally to general abdominal surgery. Following this is a presentation of work done upon the separate abdominal organs, with ample attention and space devoted to each respective organ. The chapter upon Gynecology is prepared by Dr. John G. Clark. This begins with the cancer problem-of the uterus. Radiotherapy in its application and technique in relation to the treatment of cancer, is extensively reviewed, and receives the greater attention and space. Following this we find a review of the operative procedures employed. A general treatment upon the individual organs-uterus, ovaries, tubes, and the lower genital tract with the gonorrheal and syphilitic infections; and closing with divisions devoted respectively to the female urinary system, and to miscellaneous topics. Diseases of the blood, diathetic and metabolic diseases, diseases of the thyroid gland, nutrition, and the lymphatic system, by Dr. Stengel, is well edited. Considerable space and attention is given to the blood, its diseases, and treatmen's, followed by a like treatment of the diathetic and metabolic diseases, scurvy, gout, and diabetes. A division devoted to the ductless glands, chromaffin system, and the interrenal tissue, closing with the interrelationship of the duetless glands.

Ophthalmology by Dr. Edward Jackson does not receive as much space as do the other divisions of this issue. The review is thorough, however, and it is well presented. Beginning with the use of the opthalmoscope, he next takes up the diseases of the conjunctiva, cornea and sclera; anterior chamber, pupil, and uveal tract; glaucoma; crystalline lens and vitreous: retina, optic nerve, and visual tracts; lids. lachrimal apparatus, and orbit. Each is presented with an exhaustive review, which is greatly of foreign literature. There is a complete index of the issue concluding the work. T. C. S.

MEDICAL GYNECOLOGY. By S. Wyllis Randler, M. D., Adjunct Professor of Diseases of Women, New York Post-Graduate Medical School and Hospital. Third Thoroughly Revised Edition. Octavo of 790 pages, with 150 original illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$5.00 net; Half Morocco, \$6.50 net.

The most valuable addition to this new revised third edition of Bandler's Medical Gynecology is the chapter on Internal Secretions. The relation of the various pathologic and normal states in woman are thoroughly discussed and reference is made to the work of such men as Cushing, Kermauner, Novak, Biedel and others.

In addition to the above, all the good points of the former editions are retained and much new matter added. This is a most excellent book and one that should be in the library of every general practitioner.

THE CLINICS OF JOHN B. MURPHY, M. D., at Mercy Hospital, Chicago. Volume III, Number II. Octavo of 213 pages, 55 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Published Bi-Monthly. Price per year: Paper, \$8.00; Cloth, \$12.00.

Each new edition of Murphy's Clinics makes them more and more interesting and valuable.

The second number of the third volume is before us and we have been particularly impressed with the opening lecture on Surgical and Clinical Diagnosis.

A variety of subjects is treated in this issue, all in doctor Murphy's instructive way, serving to add to the reader's store of practical knowledge.

It is never too late to do a good thing and therefore we say to those of our readers who have not seen Murphy's Clinies that they are missing much by not ordering now.

THE MOTHER'S GUIDE IN THE CARE OF INFANTS, By Henry Towne Safford, M. D. H. L. & J. B. McQueen, Inc., Washington, D. C. Copyright, 1913. Distributed by Pass City Publishing Company, El Paso, Texas. Obtainable from Dr. Safford, Roberts-Banner Bldg., El Paso, Texas. Price \$1.00.

Probably no one realizes better than physicians how necessary it is for mothers to be well informed on the subject of the proper care of children. Many lives are lost through the lack of this information. The author states in his "Foreword," "In no sense is this little 'Guide' intended to take the place of the physician, but only

to serve as an aid to him, in curing and especially in preventing the diseases of infancy." This little book is full of practical hints to mothers which are clearly stated. Part I deals with the "Young Baby" or early infancy, and the second part with the older or "Teething Baby." The last two chapters are practical, and are entitled "Formulary," and "Nursing Suggestions." We can recommend it.

E. C. P.

ANATOMY AND PHYSIOLOGY OF THE EYE AND ITS APPENDAGES. By John Wesley Croskey, M. D., Opthalmic Surgeon to the Philadelphia General Hospital. Smith-Edwards Company, Philadelphia.

Dr. Croskey has compiled a very useful pamphlet in the study of anatomy and physiology of the eye and its appendages, and it is especially useful for the purpose for which it is printed, that is, the use of the students. Naturally it is a compilation rather than original work. He seems to have failed in not putting more emphasis on the relationship between the sinuses of the nose and of the eye, this being one of the big fields in surgery of the eye and nose at the present time.

ANNUAL REPORTS OF THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION. Vol. 6, Jan.-Dec., 1913. A. M. A. Press. Chicago, Ill., 25 cents.

The present volume includes the work of the past year, which has been carried out on the same lines as in previous years.

The subject matter is presented under three headings:

1. Contributions from the Chemical Laboratory of the American Medical Association.

NEW MEXICO MEDICAL JOURNAL

- 2. Reports abstracted from the Journal of the American Medical Association.
 - 3. Unpublished work of the Laboratory.

These reports should be in the hands of every physician and we advise our readers to keep posted along the lines of the work against the Great American Fraud being done by the laboratory of the American Medical Association.

The price of this booklet is twenty-five cents and it may be had by writing to the Chicago office of the Association.

The Pathogenesis of Salvarsan Fatalities.

By Sanitats-Rat. Dr. Wilhelm Weehselmann, Directing Physician of the Dermatological Department, Rudolph Virchow Hospital in Berlin. Authorized Translation by Clarence Martin, M. D., First Lieutenant M. R. C., United States Army; Late Clinical Assistant, St. Peter's Hospital for Stone and Other Urinary Diseases, London; Member Association Military Surgeons, Berlin Urological Society, etc. St. Louis, Mo. The Fleming-Smith Company, Medical Publishers, St. Louis, U. S. A. Cloth, Price \$1.50.

This book, written by a member of the profession who has had a vast experience in salvarsan therapy, is full of most useful information and a careful reading of it wil more than repay one who administers salvarsan.

The various causes of death from the use of the drug are carefully analyzed and the means for reducing the dangers to a minimum are considered.

The distinguished author seeks to impress the necessity for greater precaution in the use of salvarsan and names these precautions as follows:

- 1. The most exact technique.
- 2. A dose of the drug carefully adapted to the individual case.
- 3. Careful observation of the prinary secretion when employing salvarsan; resorting to the most exact chemical and microscopical examination of the prinary combined treatment is employed.
- 4. The conjoint use of salvarsan with heavy mercurial treatment is dangerous! If one will use the combined treatment, then give mercury very carefully many days after the last salvarsan injection, but never reverse this rule!
- 5. Take into careful consideration every general reaction or rise of temperature, following the use of salvarsan, and make a full investigation of the causes of such effect.

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A. G. SHORTLE. M. D.. Associate Physicians.

M. W. AKERS. Superintendent.

The New Mexico Medical Iournal

Volume XII

AUGUST, 1914

No. 5

$E \cdot D \cdot I \cdot T \cdot O \cdot R \cdot I \cdot A \cdot L$

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

Are you making your arrangements to attend the annual meeting?

The program will be published in our next issue and will be a particularly good one. The Bernalillo County Medical Society is making preparation for a good time and a large attendance.

The State Fair will be "ON" and reduced rates on all the roads leading to Albuquerque will be in effect. Take advantage of this opportunity to get together for the "good of the order." Remember the dates, October 5th, 6th and 7th.

Twice within three days one of the members of the New Mexico Medical Society had occasion to patronize one of the advertisers of the Journal and each time his letter ended "credit the New Mexico Medical Journal with this order." Do you do this each time you write to one of the advertisers? Do you give the preference to the advertisers in the Journal when needing something they can furnish you? The life of this Journal depends upon its advertisers and we cannot refrain from again calling your attention to this Please say you saw it in the Journal and when possible, please, give our advertisers the chance to serve you. Remember the Tournal accepts only such advertisements as are up to standard.

The Florida Medical Journal is the latest addition to the ranks of state journals. This publication is issued monthly under the direction of editor Grahan E. Henson, M. D., secretary of the Florida Medical Society. We welcome this new state Journal.

DIET IN TUBERCULOSIS.

There appear in this number of the Journal two very good articles on special phases of the tuberculosis problem, which are highly appreciated by the writer. We have been impressed by the fact that so much attention has been given to the minutiæ of certain aspects of this question, and so little to one of the most essential points of Tuberculosis experts betreatment. come thoroughly familiar with the intricacies of the theories of infection and immunity, especially those related to the tubercle bacillus and the tubercular patient, including that elusive question, the administration of tuberculin, yet devote insufficient thought and attention to the diet.

The literature on artificial pneumothorax is already large, and an international society devotes its attention entirely to that. We do not wish to detract from the great value of open air, hygiene, and physical and mental rest, but we do think that more care should be used in seeing that patients get what they should have to eat, which is often an exceedingly difficult proposition here in the southwest.

The feeding of tubercular patients is at least as important as the most important other factor of treatment. No one will question the great value of a proper diet for these patients, although many doubt the efficacy of climate, tuberculin, drugs and certain other procedures. If physicians would devote as much time and study to informing themselves on the metabolism and food needs of tubercular patients, articles of diet and their preparation, time and conditions of eating, and normal digestive processes as they do to certain special phases of the subject of doubtful (according to some authorities) value we would get better results than we do now. Our role, in many of these cases should not end with giving advice; we can frequently be of great assistance in seeing that the patient actually gets what is ordered. The quality of food served should be first class and its preparation FAULT-LESS. We know too well how frequently the opposite is the case, and when this is true there is the ever-present danger of infection from the typhoid and para-typhoid bacilli and the dysentery organisms; we all know how dangerous these infections are under such circumstances.

There are many other factors of importance in the proper dieting of tubercular patients, but as this is not intended as an original article on that subject, they will only be mentioned. Psychic factors: pleasant conditions at the table, and in fact at all times, help digestion, and the opposite interfere with it. The digestive capacity of the average patient is below his normal.

and he should not be expected to eat, and profit by, what a strong and healthy man at hard labor needs. Institutions devoted to the treatment of tuberculosis should employ an expert dietitian who should have complete charge of the buying of food products, and their preparation and serving. A failure to do this is poor economy.

The financial condition of the patient is extremely important. If a patient has not enough money to pay for good food, etc., and he has anything but a light case and a naturally fairly strong constitution, he can look for hard times, indeed.

We hope that this little editorial will not be understood as minimizing the value of study along all lines of tuberculosis work, but we do wish to emphasize the importance of the proper feeding of tubercular patients.

E. C. P.

We call the attention of our readers to the advertisement of The Uncle Sam Breakfast Food Company which appears regularly in each issue and suggest that they use the coupon which is conveniently placed for clipping. The Uncle Sam Breakfast Food has passed a critical examination and has complied with all the requirements of the Council on Chemistry and Pharmacy of the A. M. A., and deserves the support of the profession. It is a real laxative breakfast food which is palatable as well as nutritious. We have ourselves used it and speak from experience. Use the coupon and try it yourself.

Dextri Maltose, a product of the firm of Mead, Johnson and Company is being advertised in the State Journals and if our readers are not familiar with its use a line to the firm will bring literature which will be instructive and contain much useful information.

Are you using radium? We carry in our columns the advertisement of the Radium Chemical company which markets radium in various ways. They also publish a monthly Journal which they will be glad to mail you if you will send your name anad say you saw it in our Journal.

Horlick's Malted Milk needs no introduction to our readers as it has stood the test of time. Note their advertisement in this issue.

The Battle Creek Sanitarium offers you a copy of their booklet. Use the coupon.

Clippings

THE DOCTOR AND HIS HORSE.

The classic portrayals of the Doctor usually show him on or behind a venerable or unimpeachable horse, plodding his tedious way through wind and weather. Or perhaps the picture shows him leaving the faithful steed at the gate and hurriedly seeking access to the house of suffering. Even in Luke Field's well known picture, "The Doctor," found on so many walls, one can feel very certain that the rugged figure arrived on horseback, and that the faithful beast is patiently waiting for him just outside.

But nowadays the Doctor has no such companion on his rounds. If disposed to soliloquize along the road his monologue now seldom falls on an appreciative equine ear. If he would have an objective to which to address his musings, he must be content with such ears as may be found under the steel bonnet of his motor car. I fear that little sympathy is found there with such converse as Dr. Weelum MacLure was wont to hold with his faithful Jess: "It'll take ye a' yir time, lass,—but ye never failed me yet, and a wumman's life is hangin' on the crossin'."

I do not pretend that the successor to the Doctor's horse does not elicit or even invite occasional deliverances from him. I have known physicians of my acquaintance to even dismount in order to more intimately address themselves to their motors, which in turn seemed attentively to pause the more appreciatively to listen. But I am sorry to note that the tone of address at such times was scarcely confidential, nor were the terms employed to be considered endearing, but rather ejaculatory and imprecative.—(Journal of the Kansas Medical Society, Aug., 1914.)

"BETTER BABIES, BETTER MOTHERS, BETTER CITY."

The slogan of better babies, better mothers, better city, has resounded from the billboards, and the City of New York has given an entire week to promulgating the best interests of infancy as related to the development of future citizens.

The age of the child is truly upon us. The interests of the community have been aroused and there is now a full recognition of the importance of protecting infancy, particularly in view of a decreasing birth rate. The United States is slowly awakening to the value of children as it is now appreciated in France, Germany, and England.

No one week, however, should be set aside as the baby week, save for the purpose of concentrating interest and stimulating constructive plans for the betterment of the conditions of childhood. Every week should be babies week and every day should be considered important for the continuation of the numerous activities demanded for the protection of childhood. The decrease of infant mortality redounds to the glory of intelligent, civic spirit. No plan of municipal betterment is complete, nor indeed fairly begun, unless the plans for conserving infant life are well laid. The medical aspects are of the utmost importance.

Better mothers means a better scheme of education and wider opportunity for parental instruction. Better city means improved housing conditions, more infant welfare stations, improved municipal hygiene, increased facilities for recreation, higher wages, purer food supplies, and the relief of pauperism. Better babies demand the expenditure of municipal funds.

Health is purchasable and to have better babies, better mothers and better cities demands a wise and sane constructive policy involving the investment by the city of funds whose dividends would be evidenced in better babies and more babies. A fundamental asset of city growth is found in the protection and conservation of infant lives.—(Medical Review of Reviews.)

ONLY A DOCTOR.

Who ever heard of looking at the stars through a microscope? It is hard enough to bring the star view closer through a telescope, and even then we know but little. Astronomers are modest folk; there's a tremendous lot they don't pretend to know; they are only astronomers.

And who knows man? Assuredly we do not: we are only a doctor. Man —historic man, man as he was—we do not know; we have only some telescopic images of him. Man as he is to be-his great development-what of that, and who knows? We don't; for we are only a doctor. And man as he is! Who knows anything about him unless they knew him as he was and as he will be? We know a tadpole, a fly, a bacillus; we have studied them through their generations; we know their life histories as species. What do we know of the species man? Little, very little: we are only doctors.

If disease is an entity, if all diseases are entities, we know them as we know a rock we study in the class in geology. But if rocks were living things, how little would we know of their past or of their future! Disease has a growth, a history; it changes type; it may progress or it may revert. Therefore who really knows very much about a disease? We do not; we are only a doctor.

Only a doctor, and a perturbed one at that! Do you ever long for the old regime, when we were only doctors, not scientists? Do you ever wish your families would come to you as they used to do when you were only a doctor? Do you ever get homesick for the old human and humane regime, the time before technic was king? We do,

we confess we do, for we are only a doctor. What a pleasant thing it is to be a medical grandfather to a dear little baby, at whose mother's birth you officiated years and years ago! How you love that child, to whose mother you have been a medical father confessor all these years! Yet how seldom these things happen to the scientist; he is *not* "only a doctor," but is a sort of medical plumber in the eyes of the people who "hire" him. Did you ever hear of any one loving a plumber, medical or other?

Yes, we are only a doctor; but sometimes we think—think of the time we were not "hired," think of the time when we were the one authority whose opinion was sought and whose advice was followed by our families; think, think, think of many things that were ours when we were only a doctor.

We have not changed, but the times have changed. We are only a doctor, despite these changes. And there are many, many more just like us-men who are only doctors. Think of the "only" men in your community. This one is only a preacher and pastor, but what a power he is for good! That one is only a lawyer, but he soon will be the judge. Another is only a business man, but his energy and thrift give employment to thousands. Yet another is only a teacher, but he has changed the whole spirit of the town. It is the "only" men who are the backbone of modern society.

So we are content to be only a doctor. Just now we are out of style. "Doctor" may mean anything or nothing, but "only a doctor" means a tremendous lot. Yes it does! It has meant a lot for thirty centuries, and will mean as much thirty centuries

from now. So let us who are only doctors wait in patience for our vindication. And it is coming! The great unrest is passing. The agitations are dying for want of fuel. Sane thoughtfulness is beginning to permeate society. The excesses are losing ground. The commonplace is asserting its role in life again. Extremes are losing out and real work is becoming good form.

An editor who is only a doctor has a hard row to hoe these days. people think he must be a sociologist: others believe he must be a propagandist; many tell him he must be a sort of sanctified (!) politician; many expect him to be an advanced scientist: a few want him to be a mere reporter of laboratory advances; a certain element among the technicians think his function is to be a booster for them: some of the manufacturing pharmacists regard him principally as an advertising convenience; all of the faddists want to claim him as their very own. But an editor who is only a doctor, who wants to write for doctors and have doctors write to him, who thinks and feels and longs as a doctor, who wants to be only a doctor in print as well as in his office, why does he not fit into a very large assortment of modern conceptions—noisy, blatant, assertive, belligerent things trying to drown out the voice of him who is only a doctor.

Doctor, we don't drown worth a cent; neither should you, even if you are only a doctor. Lets join the "ONLY" class in our respective communities, along with the preacher, the lawyer, the business man and the teacher; and "only a doctor" will soon again come to be a very honorable title.—(Medical Council, Aug., 1914.)

ATTACKS ON THE ANTI-TY-PHOID VACCINE.

Some of the recent newspaper reports concerning the evil effects of the anti-typhoid inoculations are grossly misleading and likely to have a most unfortunate effect in prejudicing the public against this most beneficent procedure. In the case of the Mercer family of New York, in which the mother died and three children were reported seriously ill after the use of the vaccine, it now develops that the entire family were suffering from typhoid fever itself before and at the time that the serum was used.

The statement of the Brooklyn Board of Health as to the Mercer family said that on May 2 Robert F. Mercer, of 20 Crescent Place, East New York, who was dying of typhoid, had Dr. Sydney E. Smith of 78 Arlington Avenue, Brooklyn, inoculate Mrs. Mercer, her three children, and her sister, Mrs. Blanche Romer, of 452 Eleventh Street. The vaccine was obtained from the Brooklyn Board of Health and all five became ill. Since then the mother has died and two of the children are now in a critical condition.

On May 18, the official report says, Dr. Smith, after a consultation, diagnosed the illness of the patients tentatively as "anaphylaxis." On May 22 another consultation was held, at which were present Dr. Krumwiede and Dr. Nicoli of the Health Department Research Laboratory, Dr. Blatteis, pathologist of the Jewish Hospital, Brooklyn, and Dr. Smith. The clinical examination, afterward confirmed by laboratory investigation, showed that the children had typhoid fever, the result of infection prior to the immun-

izing injections. The report then goes on:

"Although the correctness of this diagnosis has been questioned, it may be stated that the Department of Health has abundant evidence to sustain its position. The blood examination made by Dr. Blatteis on May 21 showed a marked diminution of the white blood corpuscles with a relative increase in the proportion of the lymphocytes. This is characteristic of typhoid fever. In so-called "blood poisoning," due to contaminated vaccine or to infection introduced at the point where the injection was made, just the opposite condition is found in the blood—that is, there is an increase in the number of the white blood corpuscles and a relative fall in the proportion of the lymphocytes.

"Furthermore, in "blood poisoning," cultures made from the blood frequently show the presence of the contaminating germ. In this case such blood culture, made on May 20, remained entirely sterile. Moreover, the Widal test was positive even in dilution of blood 1 to 1,000. Such positive reactions are almost unknown after a single immunizing injection.

"Finally, on May 21, as conclusive evidence of the nature of the disease, the bacteriologist of the Research Laboratory of the Department of Health found that the intestinal discharges contained typhoid bacilli."

Of the case of Mrs. Mercer, who died after vaccination, the report says that it was of the classical type of typhoid fever and that her death was due to intestinal hemorrhage and shock. The Health Department is positive that all the cases thus discussed were due to typhoid infections and that the immun-

izing injections were in no way responsible for them.

Some of the newspapers subsequently made a great to do about the case of Private Bellenger, of Troop A, First Cavalry, N. G. N. Y., who was reported to be "in bad shape" after having been vaccinated along with the other members of the troop on May 27. The reaction was probably a little more severe than usual, but could not have amounted to very much, for on the next day he was reported "nearly well."

It is in the handling of these matters of great public moment that the great city dailies need a medical editor of wide educational attainments and sound common sense, that harm may not be done by the follies of the statements of untrained reporters.—(Lancet-Clinic, July 18th, 1914.)

SAFE AND SANE IN MEDICINE.

Progress in medicine, like progress in any other field of endeavor, is secured by proper use of the knowledge gained by patient endeavor of those that have gone before and those that are of our day. In our profession we have a peculiar difficulty in that it is often impossible to be sure of our facts -or rather it is impossible for us to be sure that what is presented to us as facts properly bears that stamp. The human element—and therefore the uncertain element—enters so largely into the great mass of material we call medical knowledge that we have to be constantly on our guard against a too ready acceptance of the teachings of the untrained or careless observer. The differences of opinion at the bedside,with which we are so familiar, are but indicative of the multitudinous varia-

tions of our views in the broader field of medicine whether in the sick room or laboratory. We are constantly looking at objects from different viewpoints, and different viewpoints mean different interpretations, and a difference of interpretation in pracitcal medicine may mean a different outcome for our patient. If knowledge of a case came to us all in the same form and with the same force—the personal element would still obtain in our use of that knowledge and the manner of drawing conclusions. And yet we must know that the truth should have only one way of being observed and only one conclusion is defensible. Until a pneumonia can be so diagnosed by every physician that sees it and a reasonably uniform treatment advised we are in an unsatisfactory position. with gastric ulcer, or fracture of the hip or other pathology. It is only necessary to mention the matter to realize how far we are from uniformity in diagnosis or treatment. Only one diagnosis is right and only one treatment is best. No doubt we sometimes rather take a pride in the variety of opinions that are brought out in our medical societies. In a sense this is defensible. It at least means that there is no stagnation. But differences of opinion are to the writer often painful evidencies of inaccuracy of observation or illogicalness in deductions. They must necessarily mean that error is abroad and that we see through a very dark glass.

Osler, in the preface to his Text-Book of Medicine, uses the words "sound knowledge." It takes a shrewd man to know what is sound and dependable in the mass of stuff at our command. Good scientific training, a

mind open to new facts, and a decent capacity to doubt what somebody says, all have their part in the makeup of the physician that holds on to the largest share of "sound knowledge" and the least share of trash and buncombe. By a process of elimination he learns whose opinions to respect and all new matter put to him he passes through the crucible of common sense and makes up his mind what he can afford to accept and apply at the bedside. If he has good judgment and is willing to learn by his own mistakes the truth soon appears, or at least enough truth to stamp him as worthy of his profession.

The practitioner—especially the one who lives remote from the centers of research—has placed upon him a special obligation to hold fast to what has been found worthy and to be critical of what is offered as new. "Safe and Sane" is a slogan no more appropriate to the observance of the fourth of July than to the practice of medicine, and in the long run—the only run worth preparing for-the doctor that can measure up to the meaning of these words is the greatest credit to his profession and the greatest help to his patrons. It is he that tests medical teaching for this quality of "soundness" and appropriates it accordingly. It is he that selects with care his books and journals and reads them. It is he that sidesteps all "isms" and fads. It is he that dumps the great bulk of his "samples" in the trash barrel. It is also he that deals fairly and squarely with his peoplee, assuming no more knowledge than he has and no more skill than his fellow practitioner.— (Tennessee Medical Journal, July, 1914.)

Original Articles

IMPORTANT FACTORS IN THE PROGNOSIS OF PULMONARY TUBERCULOSIS.

Jos. S. Cipes, M. D. (The Cipes Sanatorium, Albuquerque, N. M.)

As difficult as it is to make even an approximate prognosis in tuberculosis, it is nevertheless a task with which the physician is repeatedly confronted. When the tuberculous patient comes to us, the first question he invariably asks after being examined is, "What do you think of my case?" or "Doctor, what are my chances of becoming cured?"

The question is, are we or are we not justified in giving him, along with the information concerning his condition, a prognosis of his case? Personally I believe that it is neither advisable nor justifiable to do so after the first examination, but when a reasonable length of time has passed, during which a careful study has been made of both the patient and the disease as it manifests itself in his particular case, we are, in my opinion, justified in giving him an approximate prognosis—bearing in mind, however, that nature at times confounds the logic of the most capable physician, and brings about results contrary to our expectations.

Proceeding then upon this theory, what means have we at our command by which we may with intelligence form an opinion as to whether the chances of the patient are favorable or unfavorable?

I shall endeavor to mention here the most important of the means—no one

of which when taken by itself possesses any significance whatsoever, but when considered in connection with every other one enables us, in my belief, to make an approximate prognosis which will hold good in a large percentage of cases.

I shall first consider the patient himself in his relation to the disease, and the bearing which his history, characteristics, and circumstances have upon the question of prognosis.

The history of the patient is of assistance in prognosis. A family history of long life is a valuable asset to the tuberculous person, the only danger connected with the same being that the physician is sometimes misled by the excellent history and neglects to make the proper examinations, simply attributing the various symptoms to malaria, cold, or the so-called la grippe.

The ultimate results in tuberculosis depend a great deal upon the constitution of the patient, and a record of the patient's previous health is of great help in affording a clue as to his power of resistance. Those who are debilitated from previous diseases such as typhoid, pneumonia, articular rheumatism, etc.,—especially when the debilitation is aggravated by digestive disturbances-are very seriously handicapped in their fight for recovery. On the other hand, those who were able to throw off the exanthematous and various other diseases in a comparatively short time without marked debilitating sequellæ will in all probability display good resistance in fighting tuberculosis.

It is also worth while to consider the habits of the patient regarding the use of alcohol and tobacco, the total abstainer having a much better chance for recovery than the one who has been accustomed to their use.

The manifestation of tuberculosis after the age of sixty naturally argues unfavorable results, but such cases are rarely met with. Age, in my estimation, is of real significance only when the disease manifests itself before adolescence. Then the prognosis is generally grave, owing to the fact that, aside from the destruction and malnutrition which the disease usually produces, the metabolic processes at this period of life, which, when normal are constructive, in tuberculosis become destructive, and cause arrest of development.

When we exclude pregnancy, parturition and the menopause, tuberculosis in the female can, as a rule, be prognosticated more favorable than in the male-providing that the same care and treatment are instituted as early in the case of the former as in that of the latter. I make this proviso because of the fact that in general the diagnosis of tuberculosis is not made as early in the female as in the male, due often to the aversion of the woman to an examination of the chest, and also many times to the mistake on the part of the physician in diagnosing the case as some female disorder.

It is also true that if, after the diagnosis of tuberculosis has been made, a change of climate is advised by the physician, the man responds more readily to the advice than the woman. Yet in spite of these disadvantages, it has been proven by the statistics from various sanatoria that the percentage of cures in the female is 60 to that of 40 in the male. The reason for same lies, I believe, in the fact that the female patient at the sanatorium can adapt herself more easily to the quiet,

inactive life than the male, and is more obedient, living up better to the rules and regulations of the institution.

Then too, although it is more difficult to persuade the woman to leave home for a different climate, having once taken the step, she is apt to remain for a longer period of time than the man.

It so often happens that when the man improves slightly, he feels the necessity of immediately returning to work, and soon breaks down under the responsibilities and activity of business life.

This brings us naturally to the question of financial conditions. Riches do not necessarily constitute a contributing factor to the well being of the tubercular patient, for so often the person of great means has become so accustomed to high life with its injurious pleasures and excitements that it is almost second nature with him, and he is unwilling to break away from it to follow the prescribed life of routine and quiet. On the other hand a lack of sufficient means to obtain the advantages of good food, proper surroundings, discontinuation of work, etc., is infinitely more dangerous than excess of means and renders the chances of recovery very slight.

The great number of people in financial straits afflicted with tuberculosis presents one of the saddest pictures the world can give, and one of the greatest problems which confronts society.

Means sufficient to eliminate financial worry from the mind of the patient and to permit him to obtain the best of living conditions and medical care in a favorable climate, is one of the most helpful aids in effecting a

The protracted course of tuberculosis and the various ups and downs which accompany it make quite a heavy demand upon the nervous system of the patient. The mental attitude must therefore be taken into account when considering the outcome of the case. The fretful, the fearful, the restless, and the despondent waste their vital forces and so have less resistance with which to combat the disease; whereas the calm, the hopeful and the cheerful conserve their vitality and stand a much better chance of recovery.

The intelligence and will power of the individual play an important part in this respect.

When a patient comes to a physician and recounts a tale of wanderings—several weeks in one place, a few months in another, etc.,—the physician at once realizes that unless he can convince him of the folly of this roving habit, his efforts to aid him will be practically useless. A person of this nature is very frequently found to be familiar with the majority of the patent drugs purporting to cure diseases of the lungs, and addicted to their use.

I shall now leave the patient and consider briefly the disease itself. By a psysical examination we are able to detect the amount of lung involvement as well as the portion and character of same. Very little of prognostic significance can be placed on the amount of lung involvement, for a diffused infiltrative tubercle deposit without much moisture or softening gives a more hopeful outlook than does a smaller area associated with advanced destruction of tissue.

The portion of the lung involved is, however, of considerable importance. When the lesion is at the apex it will more readily heal than when the base or the middle lobe is affected.

An apical lesion even with advanced destruction of tissue or cavity formation will under favorable surroundings heal in a shorter period of time than a superficial lesion at the base of the lung under the same conditions. This is probably due to the fact that the blood supply at this location is richer, and that the expansion of this portion of the lung is accomplished with greater ease. This area being nearer the larger bronchi also has a freer exit for the excretion of the toxins.

A careful examination of the sputum reveals considerable of prognostic value. The presence or absence of elastic fibers gives us the idea as to whether or not destruction of pulmonary tissue is present. The number of tuberculous bacilli is of little consequence, for rapidly softening foci excrete numerous bacilli, while the miliary form of tuberculosis, which is the most dangerous, throws off very few bacilli if any—usually none at all.

The diminution of the bacilli in the sputum can generally be regarded as a favorable sign unless contradicted by adverse symptoms. The various pathogenic bacteria so often associated with the tuberculous bicilli, when numerous usually render the prognosis unfavorable. Blood in the sputum or minute hemorrhages not sufficient to cause anemia, are detrimental chiefly because they produce a depression of spirits in the patient. When a hemorrhage occurs early in the disease it is a great blessing, as it acts as a signal

of danger to the often unsuspecting person, and arouses him to action before it is too late.

The presence of eosinophiles in the sputum is a favorable sign, providing the same is not due to a marked bronchitis or any other inflammatory condition of the respiratory tract.

Albuminuria signifies the presence of amyloid degeneration of the kidney, and if tubercle bacilli are found in association with it tubercular changes are evidently present, and the results are naturally unfavorable.

Indicanuria indicates autointoxication or intestinal indigestion and if it manifests itself in repeated examinations of the urine, is of serious import.

The Diazo reaction, if found repeatedly, according to Ehrlicc signifies an early death.

The most important complications of pulmonary tuberculosis are catarrhal pneumonia, pleurisy, stomatitis, gastric disturbances, fistula, and secondary tuberculosis of other organs, viz: cerebral meningitis, tubercular enteritis, peritonitis, tubercular nephritis, and laryngitis. Each one of these is important enough to be discussed as a subject in itself, and I shall hardly attempt in this paper to give the bearing of each upon the question of prognosis. I wish, however, to note in passing the one complication which is of so frequent occurrence—manifesting itself in from 35 to 40 per cent of all pulmonary tuberculosis-viz: tubercular laryngitis. This was at one time considered of grave significance by almost all physicians, and even at the present some hold this opinion, but so far in my experience it has proven, when

treatment is instituted early and kept up persistently, to be absolutely curable.

I shall conclude by citing the history of a case which came under my observation, and which illustrates well the influence of the various factors mentioned in this paper upon prognosis.

December, 1911, Mrs. M. F., age 34, married for the past six months, present occupation housework, former occupation nurse in a general hospital for about eight years.

Family history.—To the best of her knowledge no one in the family ever suffered with tuberculosis. Father and mother, also grand parents paternal and maternal, have lived a long life, no alcoholic habits or any special diseases in the family.

Previous History.-Measles, whooping cough and mumps between the age of one and five, had been well until the age of eighteen when she suffered an attack of small pox, from which she recovered in about two weeks. Was in perfect health until about seven months ago when she first began to feel tired, had coughing spells-particularly in the morning. Soon afterwards followed loss of weight, expectoration, and pain in the throat. The disease, however, was not diagnosed until a slight hemorrhage occurred. which was about three months after she began to feel badly. She was then advised to leave Illinois and go to the southwest.

On arrival here the following was her condition: cough severe—more so in the morning, expectoration eight to nine ounces in twenty-four hours, temperature 101, 101½ (afternoon), throat sore—particularly on swallow-

ing liquids, hoarseness marked, slight dyspnea, strength fair, appetite good, digestion good, weight 142 lbs.

Physical examination disclosed the following: right apex anter. consolidation to the fourth interspace, bronchovesicular breathing, numerous moist rales, and a few dry rales; left apex anter. consolidation extending to the second interspace, a few dry rales, also moist rales—after coughing and deep breathing only; right apex post, marked dulness extending to the angle of the scapula and numerous moist rales.

Laryngoscopic examination disclosed slight infiltration of the inferior portion of the right true vocal cord, infiltration of the right intravencular band and ulceration of the posterior portion of the epiglottis on the right side.

Laboratory findings. — Sputum greenish yellow, elastic fibers present, tubercle bacilli positive 50-60 in a field, and numerous strepto. and staphylococci.

Urine.—Sp. Gr. 1012, reaction acid, no albumen or indican, and the Diazo reaction negative.

This case came under my observation in the early part of December, 1911, was treated at the sanatorium for about three months and for about five months private. In the latter part of July, 1912, the patient was pronounced an arrested case, according to the old nomenclature of the National Antituberculosis Society. The same month she left for California and has been living there ever since in good health. The last I heard from her was an announcement of the arrival of a son on the 26th of January, 1914.

TUBERCULIN.

DAVID C. TWICHELL, M. D.,
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City, N. M.

(First Paper. Read before the Grant County Medical Society, April 24th, 1914.)

In a discussion on tuberculin, such as I have been invited to give before this Medical Society, I have no intention, nor have I the knowledge to give an exhaustive treatise on the subject, nor do I intend to go into the detail of the clinical use of tuberculin, nor into the matter of the selection of proper cases, both very important matters.

In any discussion on tuberculin it is only natural for me, who have had the privilege of studying for ten years under Dr. Trudeau, to go over again in more or less detail his experience in the matter. Dr. Trudeau has used tuberculin ever since it was first sent to America. He has never lost his faith in it as a helpful agent in combatting tuberculosis. He has seen the interest in the matter go through various and recurring waves of criticism and enthusiasm. He, with Dr. Baldwin, was the first to show Koch, I believe, that the Bacillen Emulsion as first manufactured might contain living tubercle bacilli. This led to a modification of the manufacture of this product which eliminated any such possibility.

With your permission I will make my paper on this subject informal and possibly too rudimentary. On the other hand, I can say in defense of such a paper that the use of tuberculin is a rather special subject and to my mind needs a more or less long, actual experience in its handling to obtain the best results of its use. So the general practitioner in a community like ours who should use it on occasion is often very much in the dark in regard to its proper use.

These two papers on the subject I have decided to outline as follows. This first paper will be my impressions of Dr. Trudeau's experience, experimental and clinical, with tuberculin. The second paper will be my own experience, under Dr. Trudeau's guidance, and my own judgments in the matter.

Of all men that I have seen use tuberculin, Dr. Trudeau, to my mind, is the most cautious. He has told me that at one time he was considered criminal in treating patients with tuberculin, and I know individuals at present working with him who now criticise him for being too cautious in its use.

To digress a moment from the subject in hand, I would like to recall to your mind Dr. Trudeau's first experiment in tuberculosis. The experiment that made him known to the medical profession of the world. As you undoubtedly remember, when the tubercle bacillus as the ætological factor was first discovered the idea was combatted. Dr. Trudeau conceived the idea of making a demonstration of the truth of the assertion, and at the same time to demonstrate, if possible, that outdoor life would tend to help an organism combat tuberculosis. The experiment was with rabbits. He inoculated 12 rabbits with tubercle bacilli. Six healthy control rabbits he also included in the experiment. Six inoculated rabbits were put in his cellar, where it was

damp and sunless and were lightly fed. Six healthy rabbits were placed in a neighbor's cellar under the same conditions. Six inoculated rabbits were placed on a very small island in Saranac Lake, where they had plenty of feed and could be easily captured. At the end of several weeks all the rabbits in his cellar were dving of tuberculosis. The six in his neighbor's cellar were thin, but showed no sign of tuberculosis. Of the six on the island, some had a distinct tuberculosis, but the others showed only slight evidences of infection, but the condition of all the animals on the island was remarkably superior to those in his cellar. experiment has no bearing on tuberculin, as you see, but I merely mention it as an illustration of the simplicity of Dr. Trudeau's experiments and his desire in all his experimental work to obtain, if possible, a practical addition to our knowledge and to give hints as to clinical aid for the tuberculous human.

Dr. Trudeau and Dr. Baldwin found that it was possible to cause a small, slowly-progressing tubercle in the eye of a rabbit by incising the cornea and introducing a small measured quantity of a slightly virulent culture of tubercle bacilli. Such a tubercle is easily watched with the naked eye through its development. Dr. Trudeau found that in the study of such a tubercle he could see the focal effects of an injection of old tuberculin introduced subcutaneously in any part of the animal's body. The result of such an injection would be in a few hours the marked inflammation of the eye, with the engorgement of all the local blood vessels. His study was directed toward the better knowledge of tuberculin reaction, but

the fact became apparent on repeated injections in the same animal that the tubercle tended to cease to develop and become partially healed at least, while in the control animal not under treatment the tubercle gradually progressed.

Dr. Trudeau says that the most interesting lead he ever got was his work, some years ago now, in the attempt to immunize guinea pigs with attenuated living cultures. The cultures used were the descendents in one case of the original culture, used by Koch in his first experiment. It is called K_1 and was obtained by Dr. Baldwin from Koch. This culture from its long life on artificial media is very much attenuated. It causes when injected in guinea pigs not even an abscess formation, unless the dose is large.

The culture R_1 was also used. This culture was obtained by Dr. Trudeau by inoculating a rabbit with human sputum and reclaiming the bacillus from the spleen, I think. It is probably the oldest culture in America. and should be known as T_1 , but with his usual modesty, Dr. Trudeau named it R_1 , after the rabbit.

This culture has been growing for some years now continuously on artificial media and is of quite low virulence, yet more virulent than K_1 . In proper dosage it will set up a glandular tuberculosis and slowly advance in the organism.

Dr. Trudeau's experiment was the attempt to immunize healthy guinear pigs by a previous dose of K_1 or R_1 .

An interval was allowed to elapse—two to three weeks, I believe—before an injection of virulent tubercle bacilli of human origin was made into all the animals, and also into control healthy

animals. The immediate result was a surprise to Dr. Trudeau. The animals vaccinated with R₁ became in a short time, a few hours I believe, apparently very ill, and he and Dr. Baldwin fea ed that they would die. The animals vaccinated with K₁ and the unvaccinated animals showed no immediate effects of the inoculation with virulent bacilli. Shortly after the initial shock, the R₁ animals began to improve in condition and when all the animals were killed some weeks later were found to have the least evidence of tuberculosis of all the groups. The animals vaccinated with K₁ and the control animals had lesions very similar. Apparently the K, bacillus was so attenuated that it did not set up any response in the animals.

The partial immunity conferred by the R_1 is now more or less understood, but at that time was a great puzzle to Dr. Trudeau. Yet since that time he has often said that the successful vaccinating agent to be discovered must, most probably, be a *living* vaccine.

Later another experiment was undertaken by Dr. Trudeau, to demonstrate, if possible, the comparative curative effect of the different tuberculins. Guinea pigs were inoculated with a minimal dose of virulent human tubercle bacilli. The attempt was made to give such a small dose that the animals would develop a slowly progressing disease, resembling human chronic tuberculosis; and not be overwhelmed by the size of the dose of virulent tubercle bacilli. These animals were treated regularly with tuberculin. One set received increasing doses of bacillus filtrate, and another increasing doses of bacillen emulsion. After an interval of treatment, pigs were killed from the different groups, along with control animals, and this was repeated at stated intervals until all were killed. There was no definite evidence that the tuberculin treated pigs were helped in their struggle to control the virulent inoculation. All the animals were about equally tuberculous. This may have been in part due to the fact that even the minimal dose of virulent tubercle bacilli overwhelmed these small animals.

Ever since founding the Adirondack Cottage Sanitarium in 1884, Dr. Trudeau has used tuberculin in that institution, in diagnosis and treatment. He has always contended that by its use and the knowledge so gained alone was the road to advance in development of specific treatment of tuberculosis to be found.

Old tuberculin was used at the sanitarium for diagnosis and treatmnt at first. Later the other products as they were produced, although old tuberculin has alone been used in diagnosis. Bacillen emulsion was given a thorough trial and mixtures of this emulsion and some of the other products. I believe I am right in saying that at Saranac Lake there has been less and less use of bacillen emulsion in the past few years, due in part to the liability to very unexpected violent reactions in the course of treatment with this kind of tuberculin. In the past few years there has also been a decreasing use of tuberculin as a diagnostic agent.

In latter years Dr. Trudeau has advised, and mostly used, bacillus filtrate.

Hand in hand with his very cautious and conservative use of tuberculin, Dr. Trudeau is all enthusiasm over a case

undergoing tuberculin treatment, and ever hoping and expecting to see it turn the scale in favor of the patient in the long struggle for health.

(Second Paper. Read before the Grant County Medical Society, May 29th, 1914.)

In any discussion on tuberculin except along the most general lines, it is, in my judgment, very important to specify the particular kind of tuberculin under discussion. Of course, all the various products that go under the general name of tuberculin have certain characteristics in common, but each product, due to the difference in manufacture, has certain characteristics peculiar to itself.

I will take the liberty of describing certain of the commonly used tuberculins.

Koch's Old Tuberculin, so-called, was a glycerine broth culture of the tubercle bacillus. He took pure cultures of tubercle bacilli which had grown four to six weeks on 5% glycerine broth, filtered and concentrated the filtrate by boiling to 1-10 of its volume, thus obtaining in a 50% glycerine medium the soluble bodies secreted by the tubercle bacilli. In this tuberculin the substances from the tubercle bacillus are undoubtedly reduced or altered by the action of boiling.

The T. R. Tuberculin of Koch is produced by taking highly virulent cultures of tubercle bacilli, drying them in vacuo and triturating them in a mortar. The resulting powder is treated with sterile distilled water and centrifugalized. The supernatant clear fluid is then removed and to this Koch gave the name of Oberes Tuberkulin. The

solid residue is then again dried and the same process of extraction repeated several times, the fluid used each time being preserved and the whole finally mixed together. This mixture constituted the residual tuberculin T. R.

This tuberculin, it is seen, differs from the old tuberculin in containing more or less of the solid substance of the tubercle bacilli used in its manufacture.

The Tuberculin B. E. or Bacillary Emulsion introduced later by Koch is made by taking highly virulent cultures of tubercle bacilli, drying them in in vacuo and triturating them in a mortar of special construction, so that the bacilli may be ground continuously for several days. The pulverized bacilli are then suspended in one part to 100 of distilled water with equal parts of glycerine.

A matter of practical importance is to be noted in regard to this product. It is a suspension and so should be thoroughly shaken before use to avoid the possibility of sedimentation leading to improper dosage.

B. F. Tuberculin or Deny's "Bacillus Filtrate," is made by taking pure cultures of tubercle bacilli which have grown from four to six weeks on 5% glycerine broth and filtering the whole through a Berkfeld filter. The filtrate which is Deny's tuberculin is not boiled. This tuberculin then contains, besides toxins secreted by the living bacilli, only those proteins from the dead bacteria which go into solution in the culture fluid, while the insoluble proteins which remain in the bacterial bodies do not pass into the filtrate.

It is to be noted that this tuberculin contains substances from the tubercle bacillus more or less unchanged, at least not reduced or altered by boiling.

Of interest lately has been the question of the possible value of the Friedmann living turtle bacillus vaccine. Some few striking cases of improvement, especially in gland and joint cases, following injections of the turtle bacillus are now being reported in Germany.

A committee of the Association of Sanatorium Physicians of Germany, Austria and Switzerland has issued the following statement:

"We were of the unanimous opinion that the cases shown by Friedmann had been clinically very badly observed, and as a whole could not at all be considered as successes. We were astonished that no carefully recorded temperature and weight curves were shown. The x-ray plates which were shown to us as evidence of cures did not actually prove anything whatsoever. We will admit that some cases indeed made an impression upon us, but here we must also remember that such cases occur without any treatment or with any kind of treatment, and that the number of them was altogether too small to permit of a favorable judgment of the value of the remedy."

Lydia Rabinowitsch, in Koch's laboratory, has lately found "that of guinea pigs injected with acid-proof bicilli from Friedmann's vaccine, some developed small foci with bacilli in them and that one presented the picture characteristic of tuberculosis produced by the inoculation of feebly virulent tubercle bacilli of the mammalian type." In a large proportion of different samples Babinowitsch, found streptococci which were pathogenic for guinea pigs.

A guinea pig injected by me on April 24th with a large quantity of Friedmann's living turtle bacilli, when killed, May 18th (3½ weeks), showed no evidence of disease of any kind.

Now as to the observed effects of tuberculin on the healthy human and on the tuberculous human. Robert Koch took himself, I believe, several hundred milligrams of old tuberculin subcutaneously without any marked resulting symptoms. It is known that very young healthy infants can take as much as 1,000 milligrams of old tuberculin subcutaneously without observed effects.

In the case of the tuberculous individual two facts are known: (1) that an appropriate dose can cause a socalled "reaction." This reaction may be both "focal," causing an apparent acute inflammatory disturbance at the focus of disease and "general," causing a constitutional disturbance with fever, malaise, etc. (2) In the second place by a very gradual increase in dosage from a minimal dose a tolerance can be established in a tuberculous individual. We often see such cases take 1,000 milligrams without any reaction at all. Dairy men know this fact for they have been known to prepare their herds for the state tuberculin test by giving their cattle several increasing doses of tuberculin so that they will fail to react and so escape being condemned. Victor Vaughan says in this connection:

"Many investigators have failed to sensitize animals with tuberculin, while most have succeeded with dead bacilli and with aqueous extracts. This is not surprising; indeed, it is what should have been expected. Tuberculin consists of digested, denatured proteins of relatively simple composition. It is well known that peptones and polypep-

tids do not sensitize. The protein poison, when detached from other groups in the protein molecule, sensitizes neither to itself nor to the unbroken protein. The fact that tuberculin does not sensitize, or does so imperfectly, raises a serious question as to its employment as a therapeutic agent. It is undoubtedly an excellent diagnostic agent because its relatively simple structure favors its prompt cleavage when injected into an animal already sensitized by the disease. But if it is not a sensitizer its therapeutic good effect, if it has any such effect, must be confined to the possible establishment of a tolerance to the tuberculopoison. Sensitization to tuberculoprotein can be induced by bacillary emulsions, with watery extracts, and with the non-poisonous residue. If the sensitization secured by the last-mentioned agents is as good as that produced by the others, it has the advantage of not containing any poison. On the other hand, if the therapeutic effect desired consists in the development of a tolerance to the poison, tuberculin must be preferred unless we should use the more completely isolated poison." (Italics author's.)

As to tuberculin in diagnosis I would merely state that the skin reactions (von Pirquet test, Calmette eye test, Moro tuberculin ointment test, and intradermal test) should, in my judgment, be classed together as tests for infant tuberculosis as von Pirquet distinctly stated and only claims for his test. The Calmette eye test should only be mentioned to be condemned, in my judgment, on account of the observed danger to the eye. The Moro ointment test has certainly the distinct disadvantage of no exact measure of

dosage. The intradermal test has advantages in that a measured quantity, usually .01 mgms. to .02 mgms. can be placed by the hypodermic needle directly in the horny layer of the skin.

Dr. Trudeau has always used the subcutaneous test with Koch's Old Tuberculin, with doses from 5 mgms. to 10 mgms., in his practice more or less for many years; less, certainly, in the last few years. I believe the use of this test-and it is the only test for adults—has a very limited field. That is in differential diagnosis of a puzzling case. And there a negative result is the most important finding. All results must be read in the light of the clinical history and the signs and symptoms in the particular case. I also believe that a positive reaction is only of importance if the reaction is sharp and distinctive with fever from 101 to 103 and evidences of focal and constitutional reaction. It should be borne in mind that the tuberculin test is only one of the AIDS to diagnosis and not an absolutely specific test.

A discussion of tuberculin in treatment often is merely a discussion of the different empirical methods of GIVING tuberculin. In such a discussion of methods, we would consider, first, induced focal reactions as was the original method of Koch; second, (that is chronologically), the method of very gradual increase of dosage with the avoidance, if possible, of all clinical reactions as advocated by Deny, Trudeau and Sir Almoth Wright; third, as is often done at the present time by some practitioners a method of gradual increase of dosage in the face of slight or marked reactions.

To my mind the tuberculin treatment of surgical and pulmonary tuberculosis

should properly be discussed separately. The remarks in this paper apply almost entirely to pulmonary tuberculosis with which subject I am more familiar. But at this point I will report a case of surgical tuberculosis treated with tuberculin for the interest and information bearing on tuberculin as illustrated by it.

Mr. C. C. Remington, a lawyer. Came to Saranac Lake three years ago. He gave the following history. Three vears before that date he had noticed a swelling in his right groin. This swelling grew large and became tender. His physician after a time noticed that the swelling, apparently an inguinal gland, was pointing. swelling was incised and drained but no attempt was made to remove the gland or glands involved. The wound refused to heal, and as time went on, it developed into a large running ulcer with several pockets. The discharge was more or less foul, and this, with the necessary dressings, proved a great annoyance to the patient. Simple washings with antiseptic solutions for a long period gave no relief. The ulcer was treated at different times by the application of X-rays and Finsen rays, with no relief. A staphylococcus vaccine and a colon bacillus vaccine made from the discharging pus gave no benefit when injected in treatment. Just before coming to Saranac Lake the patient was given a cautious course of tuberculin treatment with very small doses, after a diagnosis had been established by finding tubercle bacilli in a bit of tissue cut from the side of the ulcer. This course of tuberculin with very small doses produced no effect on the ulcer.

On examination the patient seemed a particularly robust man of 35 years. Apparently all organs normal and he gave no symptoms at all, except those of the discharging ulcer. It was decided to try more or less heroic doses of tuberculin so as to produce focal reactions if possible in the ulcer with stimulation to healing. Such heroic doses seemed justifiable and safe as he showed no evidence of pulmonary or other tuberculosis outside the ulcer. For two months he was treated twice a week at first, later with longer intervals, by injections of T. R. tuberculin, beginning with .001 mgm, and increasing rapidly to the final dose of 2 mgms., i. e., of the actual solid substance of the bacillus, which by fluid measure would be called 1,000 mgms. The doses were given in four locations about the ulcer, two in the abdominal wall and two in the upper thigh. The day following the dose Bier's suction cups were applied over the ulcer with the idea of inducing the lymph flow from the points of injection toward and into the ulcer.

Soon after the treatment was instituted the sites of injection at each treatment showed large indurated lumps which were tender and would persist for two or three days. For the first two weeks the ulcer appeared under this treatment much more active in discharge and was much more painful to the patient; in fact, he assured me that it was certainly getting worse under the treatment. An explanation that the attempt was being made to stimulate the ulcer satisfied him to persist in the treatment. Several new pockets broke open and discharged as the treatment continued. The browny tissue about the ulcerated area began

to soften and the skin to appear more The discharge became less foul and the patient began to report that he could walk and swing his leg with less discomfort. The last two doses of 800 and 1,000 mgms, fluid measure gave sharp focal and constitutional reactions with fever to 102, malaise, etc. There were never any signs or symptoms of pulmonary disease with the reactions. In the two or three weeks following the final doses the ulcerative area promptly healed, leaving clean, soft scars, which up to the present time, 3 years, have remained in a perfectly condition, with no tendency to a recurrence of the condition.

My own judgment in the matter of the tuberculin treatment of pulmonary cases is very largely governed by my experience under Dr. Trudeau. later years he has advised and mostly used in such cases Bacillus Filtrate. He is very cautious in advising the use of tuberculin in a given case and very cautious in its administration. I have never known him to advise this treatment in a case that was progressing satisfactorily under hygienic and climatic treatment. In cases that have apparently come to a standstill under these conditions—with the balance struck between the invaded and invading arganism—he advises a cautious use of tuberculin, starting with an exceedingly small dose and increasing very slowly. Any evidence of intolerance as shown, not necessarily by fever or marked symptoms, but by increased cough and expectoration, pleuritic pains, lassitude, or loss of weight, he feels should not be disregarded, but should lead the physician to lengthen the interval between doses, repeat the same dose, reduce the dose or discontinue the treatment altogether, if the symptoms persist.

I consider tuberculin a very powerful agent even in the very small doses we now use, for good in carefully selected cases, and maybe for distinct harm if blindly used.

It has occurred to me that the following method might give satisfactory results in treatment. Two facts would seem to be established in regard to tuberculin: first, that it is possible to create a tolerance to tuberculin by gradually increasing dosage: second, that it is possible to cause a focal reaction in the tuberculous organism by the proper dose. Could we not by starting with a very small dosage and gradually increasing create a certain amount of tolerance and then by a rapid increase produce a focal reaction and limit our treatment to this procedure? In methods now in use this is often practically done because on the first sharp reaction the treatment is discontinued due not to design but to the caution of the physician or to the disinclination of the pationt to continue with the treatment. Such a method would take into account the observed fact that patients are often improved in general condition following a diagnostic reaction and that many patients show apparently the most marked improvement in the period directly following a course of tuberculin. Also such a method would follow the teachings and beneficial results as shown by Koch in his early method of producing focal reactions.

Abstracts

American Proctologic Society.

The 16th annual meeting of the American Proctologic Society was held at Atlantic City, N. J., June 22 and 23, 1914. Officers were elected for the ensuing year as follows: President, Louis J. Krause, M. D., Cincinnati, Ohio; Vice-president, Collier F. Martin, M. D., Philadelphia, Pa.; Secretary-theasurer, Alfred J. Zobel, M. D., San Francisco, Calif.; Executive Council, Jas. A. MacMillan, M. D., Detroit, Mich., Chairman; Louis J. Krouse, M. D., Cincinnati, Ohio; Lewis H. Adler, Jr., M. D., Philadelphia, Pa.; Alfred J. Zobel, M. D., San Francisco, Calif. The place of meeting for 1915 will be San Francisco, Calif. Exact date and headquarters will be announced later.

The following were elected Associate Fellows of the Society: Dr. Wm. H. Axtell, Exchange Block, Bellingham, Wash.; Dr. Rolla Camden, 915 Avenue of the Presidents, Washington, D. C.; Dr. Descum C. McKenney, 1250 Main St., Buffalo, N. Y.

The following are abstracts of some of the papers read:

Coccygodynia: A New Method of Treatment by Injections of Alcohol. By Frank C. Yeomans, A. B., M. D., of New York City, N. Y.

The diagnosis is established by a thorough examination, both general and local. Local examination is made by inserting the index finger into the rectum and palpating the coccyx between it and the thumb outside. The soft parts intervening between the coccyx and anus are now compressed and the point of maximum tenderness is thus located, usually just beyond the tip of the coccyx. Proctoscopy rules out rectitis.

The prognosis hitherto has been better in the traumatic cases than in those of frank neuralgia or neuritis. The writer confidently predicts that the treatment proposed will render the latter equally amenable to treatment.

The writer proposes a treatment based on the suggestion of Schlosser in 1907, of injecting 70 to 80 per cent alcohol in sensory nerves, thereby causing their degeneration as practised with marked success in trifacial neuralgia.

The technique is simple and can be carried out in the office under strict aseptic precautions. The patient with empty bowel is placed on a table in the Sims' position and the skin about the coccyx painted with tincture of iodine. A 2 cc. Luer or similar needle is filled with 80 per cent alcohol and armed with a two inch needle. The right index finger is now inserted into the rectum and the point of maximum tenderness is determined by counter pressure with the thumb outside. Maintaining the finger in the rectum to guard against puncture and as a guide, the needle is introduced through the midline directly to the painful spot, and 10 to 20 minims of solution are injected slowly.

The needle is withdrawn and its puncture sealed with collodion. The pain from the injection lasts a few minutes and is followed by a dull ache which may last a day or two. From three to five injections are usually required at intervals of about one week.

The writer reports seven cases, all women, treated from two months to four years ago. They required three, four or five injections each at intervals of about one week. Relief was prompt and complete and all the patients have remained well.

Further Observations on Pruritus Ani: Its Probable Etiological Factor; Results of Treatment. (A fourth report, based on results of original research.) By Dwight H. Murray, M. D., Syracuse, New York.

In this report on the fourth year's work of original research on pruritus ani, the author finds there is not much more to give to the profession beyond the confirmation of the work of previous years. He has yet no reason to doubt his claims for the infectious theory of pruritus ani.

Twenty new cases have been examined during the past year. In all but two of these streptococcus fecalis has been demonstrated.

It has been found that occasionally the bacterial growth seems to be so lacking in strength that it is difficult to obtain an autogenous vaccine. It is not known why this is so unless it is owing to the very low grade inflammation produced by germs not so active as those found in many other infections.

During this year two cases were treated by other physicians who tried to follow his technique, but in neither case was improvement manifest notwithstanding that streptococci were found present by the author's bacteriologist and although the same quality of vaccines were used. With the consent of their physician the author took up the treatment. Improvement was marked. The only point of difference in the technique that he could discover was that the others injected the vaccine deep into the mucle instead of directly into the skin or immediately beneath it.

During the past year the author has had additional proof that the itching does not extend appreciably above the white line of Hilton. He has also had continued confirmation of his previous statement that the moisture found upon the parts is not a discharge from the rectum.

This past year's work again shows that other rectal diseases are not present regularly with pruritus ani, and the belief is confirmed that they are coincidental instead of etiological.

No unfavorable sequelae arose from the vaccine injections. There is now no hesitation in running the dose up to two billion or more dead bacteria. One injection resulted in the formation of a jelly-like material in the tissue but this was absorbed. Some time ago a similar swelling was opened and found to be sterile, and no trouble has resulted.

Treatment of Amebic Dysentery by Emetine Hydrochloride. By Alfred J. Zobel,, M. D., of San Francisco, Calif.

The writer gives a brief culling from the literature on the emetine treatment of amebic dysentery, and also a few words relative to the drug itself.

He states that in emetine hydrochloride we have a reliable, non-toxic drug possessing a definite specific action; which may be administered hypodermically, and yet which will permit of a sufficient dose being given without causing any depression, nausea, vomiting, or local reaction.

He reports two interesting cases in which the disease was present in one individual for ten, and in the other for fourteen years. Under the influence of emetine, within two or three days amebae, blood, mucus, froth, and foul odor disappeared from the dejections and heir number greatly decreased; the racking tenesmus, bearing down feeling in the rectum, the colic, and the abdominal tension, discomfort, and gurgling absolutely ceased. Proctoscopic examinations revealed the favorable influence of the drug upon the

amebic ulcerations. No amebecidal brigations were employed.

He further reports other cases seen by him in consultation which demonstrate most forcibly the necessity for a proctoscopic examination of the bowel and a microscopic examination of the feces in every instance where a diarrhoea lasts longer than a week, even though the patient has never lived in nor visited a locality where the disease is known to exist.

He advises that emetine should be given for at least three or four months at intervals before the patient should be considered free from the possibility of a recurrence, even though he is clinically cured and the amebae cannot be longer found in the stools.

Amebic Dysentery and its Treatment. By Dr. Wm. M. Beach, of Pittsburgh, Pa.

The writer of this paper states that:-

(1) Amebic dysentery in the early stages may be cured with emetine. (2) In cases somewhat advanced emetine is efficacious and at least clinically curative. (3) The use of the duodenal tube, through which to introduce solutions of emetine to any portion of the intestinal tract, should receive trial and consideration. (4) For rapid cure, and control, eccostomy or appendicostomy is the best measure in advanced and chronic cases. (5) Direct irrigation from above is superior to rectal injections, in that it is less painful and more thorough. (6) The appendix should be removed in most cases of amebic dysentery. (7) The so-called specific emetine can be easily applied in weak solutions.

Hemorrhoids; Their Treatment. By Dr. J. Rawson Pennington, of Chicago, Ill.

Dr. Pennington states that clinically hemorrhoids should be classified: (1) ac-

cording to their location; (2) according to their structure.

According to their structure they are divided into, (a) those containing fluid blood, (b) those containing clotted blood, (c) those containing both fluid and clotted blood, and (d) those consisting of "skin tabs" or folds of skin.

Most hemorrhoidal cases can be operated on under some form of local anesthesia. He operates on 90% of his cases by blocking the field of operation. The cocaine is usually employed in the strength of from ½ to ½ of 1%. The quinine and urea in from ¼ of 1% to 1% solution. Sometimes he combines the solutions, the cocaine being used for its immediate effect and the quinine and urea for prolonging the anesthesia.

During the last 20 years he has given a fair trial to a number of methods advocated which promised a reasonably good result, including the ligature, the clamp and cautery, Whitehead, injection, suturing and other methods which unite tissue in mass, and has come very definitely to the conclusion that by far the best way of treating this condition is by the excision or enucleation method.

The operative procedure should have for its object the removal of the cause of the tumefaction. The treatment for each type of hemorrhoid should be practically the same. This should consist in removing an ellipse from the tumor-like formation and in the case of the thrombotic nile turning out the clot, and in that of the internal variety the varicosity and allowing the blood to escape, and in the fleshy pile of dissecting out the excess of tissue.

Local Treatment of Anal Fissure. By Jas. A. Durcan, M. D., of Taledo, Ohio.

The writer describes a treatment for

anal fissure which he has employed successfully for the past thirteen years. The fissure is brought into view by separating the folds, and the surface is lightly curetted, then thoroughly dried, and a drop of collodion applied. This takes only a moment or so. A recent ulceration requires but a single application. A sharp stinging pain lasting for only a few minutes is caused, and then the patient is left perfectly comfortable.

New and Nonofficial Remedies.

Since publication of New and Nonofficial Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies."

Arlco-Urease.—A standardized preparation of the ureolytic enzyme obtained from the soy bean. It decomposes urea into ammonia and carbon dioxid and is used in the estimation of urea in urine, blood and other body fluids. The ferment is added to a measured amount of urine and, after a time, the amount of ammonia formed is determined. Arlington Chemical Co., Yonkers, N. Y. (Jour. A. M. A., July 11, 1914, p. 165).

Urease-Dunning.—A highly potent and standardized preparation of the ureolytic enzyme obtained from the soy bean. It decomposes urea into ammonia and carbon dioxid. It is used for the determination of urea in urine, the amount of ammonium carbonate, formed from the ammonia and carbon dioxid produced is determined by titration with volumetric acid. Urease-Dunning is supplied only in the form of Urease-Dunning Tablets, containing 0.025 Gm. Hynson, Westcott and Co., Baltimore, Md. (Jour. A. M. A., July 11, 1914, p. 165.)

Electrargol for Injection.—Ampules containing 10 cc. electrargol in the non-isotonized condition. Comar and Co., Paris, France. (Jour. A. M. A., July 11, 1914, p. 165.)

Styptick Applicators, Alum 75 per Cent.

—Sticks tipped with a mixture of alum 75 per cent and potassium nitrate 25 per cent. Admitted to the Appendix to New and Nonofficial Remedies. Antiseptic Supply Company, New York. (Jour. A. M. A., July 11, 1914, p. 165.)

Propaganda for Reform.

Robinol.—Robinol is a glycerophosphate mixture exploited by John Wyeth and Brother on the discarded theory that certain diseases are due to a loss of phosphorus from the body and that this phosphorus deficiency is best remedied by administration of glycerophosphates. There is no evidence that glyccrophosphates when administered act differently than do inorganic phosphorus compounds. At all events, if phosphorus deficiency really occurs, it would be more rational to supply the needed phosphorus in the form of foods rich in phosphorus such as milk and eggs. (Jour. A. M. A., July 4, 1914, p. 49.)

Sevetol.—There was a time when physiologists thought that fats were absorbed into the blood in the form of a fine emulsion. It is now known that fat enters the blood after having been split into glycerol and fatty acid, the latter being, to a large extent, combined with alkalies in the form of soaps. Making use of the discarded theory Sevetol, put out by John Wyeth and Brother, is presented to the profession with the claim that it is a very fine emulsion of fat and because of this is readily absorbed. While Wyeth and Brother would have physicians believe that Sevetol is readily absorbed and digested, it is evident that the amount of Sevetol which can be taken is limited not only by the power of assimilation but also by the power of digestion. (Jour. A. M. A., July 4, 1914, p. 49.)

Tooth Detergents.—While many tooth preparations are alkaline from the soap which they contain, it is probable that weakly acid preparations are to be preferred. As the antiseptics in tooth powders and washes do not remain in the oral cavity for any length of time, they cannot exert any beneficial action. Antiseptics may even be harmful in that their periodical application may render the organisms which infect the mouth more hardy and vigorous. (Jour. A. M. A., July 4, 1914, p. 50.)

Dr. Jiroch Company, A Fraudulent Concern.—The federal authorities have declared the Dr. Jiroch Company, 533 S. Wabash Ave., Chicago, fraudulent and and denied it the use of the mails. This medical mail-order concern sent out a treatment which appears to have been the same no matter what the symptoms reported by the victim. Examination of the four kinds of tablets sent out, in the A. M. A. Chemical Laboratory, showed these to contain ordinary tonic and laxative drugs. (Jour. A. M. A., July 11, 1914, p. 179.)

Lithium Salts in Uric Acid Diathesis.—
There is no reliable clinical evidence that lithium salts increase the excretion of uric acid by the kidneys, except as they exert a diuretic action. Experimental work has failed to show that lithium salts or the alkalies cause the absorption of depostied urates, gouty tophi, etc. The popular belief as to the action of lithia is founded on a misinterpretation of chemical facts. There is no reason why lithium salts should be expected to favor the solution of uric acid or urates in the tissues,

the blood-serum or the urine. (Jour. A. M. A., July 11, 1914, p. 184.)

Wine of Cardui.-While the Chattanooga Medicine Company asserts that in the manufacture of Wine of Cardui no more account is used than is necessary to preserve it, experiments indicate that the preparation contains only water-soluble constituents and that a non-alcoholic preparation might easily be prepared. Also, despite the owner's assertion that Wine of Cardui cannot be used as a tipple, large doses were taken experimentally with no observable effects other than those of alcohol; further, letters from physicians assert that the preparation is used habitually, evidently for its alcohol effectsprobably unconsciously. The exploitation of Wine of Cardui is vicious and the public should be apprised of the facts. (Jour. A. M. A., July 18, 1914, p. 258.)

Strychnin and Caffein in Cardiovascular Disturbances.-Aided by a grant from the Council on Pharmacy and Chemistry, Dr. L. H. Newburgh has made a painstaking study of the action of strychnin and caffein on cardiovascular disturbances. He concludes that, since the blood-pressure is not low either in persons showing grave symptoms of pneumonia or of those dying from that disease, and since is has been proved that the vasomotor arcs are normal in animals after death from pneumonia, it is logical to conclude that the vasomotor mechanism is not impaired in pneumonia. Strychnin does not improve or augment the work of the heart in persons suffering from broken cardiac compensation. It could not be shown that either strychnin or caffein stimulated the cardiovascular apparatus in any of the conditions studied. (Jour. A. M. A., July 25, 1914, p. 311.)

Sodium Fluoride.—While the poisonous character of fluorides is recognized, the

use of sodium fluoride as a food preservative is still considered. As a result of experiments, F. Schwyzer concludes that fluorine preparations are poisonous even when administered in very small doses. (Jour. A. M. A., July 25, 1914, p. 323.)

Vaccine and Serum in Hay-Fever.—A serum for the treatment of hay-fever is described in New and Nonofficial Remedies. Theoretically there can be no vaccine treatment of this disease for the reason that it is produced, not by bacteria, but by the pollen of various plants. The use of vaccines derived from the microorganisms found in the nasal secretion are still in the experimental stage. (Jour. A. M. A., July 25, 1914, p. 340.)

Book Reviews

MODERN SURGERY: GENERAL AND OPERATIVE. By J. Chalmers DaCosta, M. D., Samuel D. Gross Professor of Surgery, Jefferson Medical College, Philadelphia, Pa. Seventh Edition, Revised, Enlarged and Reset. Octavo of 1515 pages, with 1085 illustrations, some of them in colors. Philadelphia and London, W. B. Saunders Company, 1914. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

The seventh edition of DaCosta's Surgery comes to us as a revised, enlarged and entirely reset volume containing many additions over the earlier volumes.

DaCosta's Surgery has long been a popular work and this new volume will add much to its popularity with both student and practitioner.

We desire to warmly commend the preface to this book as it is a marked departure from the usual stereotyped form and shows a sincerity on the part of the author to really present a book of value.

The printing and binding are in Saunders' usual satisfactory style.

There has recently been issued from the Smithsonian Institute a volume of the Smithsonian Miscellaneous Collection series under the title Atmospheric Air in Relation to Tuberculosis. This is the successful essay in the competition held by the institution for the best essay on this subject presented at the time of the International Congress on Tuberculosis held in Washington in 1908 and is by Doctor Guy Hinsdale of Hot Springs, Virginia. The published essay has been revised so as to include advances made in the study of the subject down to the date of the publication.

The essay is a most exhaustive creatise on the subject and shows a most painstaking search of the literature and contains much valuable information.

Those of our readers interested in the volume may obtain information as to price from the Smithsonian Institute, Washington, D. C.

The New Mexico Medical Iournal

Volume XII

SEPTEMBER, 1914

No. 6

$E \cdot D \cdot I \cdot T \cdot O \cdot R \cdot I \cdot A \cdot L$

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

You want a larger and better journal YOU CAN HAVE IT BY WAIT-ING OUR ADVERTISERS: "I SAW YOUR AD. IN OUR STATE JOURNAL."

FAVOR THOSE WHO FAVOR US

The fact that in addition to the annual meeting of the New Mexico Medical Association, sixteen other state conventions of fraternal and professional organizations will be held in Albuguerque during the state fair, October 5 to 10, attests the popularity of Albuquerque as a place of meeting during fair time. From its serious side the state fair this year presents interesting features to those concerned in the development of the state. Every county has reserved exhibit space; the display of live stock and agricultural products will be exceptionally fine, because of the unusually favorable year, and the development features will be of keen interest to every one owning a share in the sunshine state.

The amusement program includes many pleasant social features, six days of first class horse racing; with all the horses on the fast Santa Fe circuit entered; automobile and motorcycle distance and track racing; an aviation contest; several amusement features of unusual merit; the usual carnival company; the usual noise and rush and bustle of fair time, with what promises

to be the biggest attendance in recent years. President Ely of the state fair commission has dubbed it "The state's biggest fair in the state's biggest year."

Of special interest to the medical profession will be the "better babies" contest in which some 300 children under 3 years of age are already entered and to whom will be awarded something over \$1,500 worth of cash and other prizes, awards to be made on the basis of physical perfection, and to be determined by a commission chosen from the attending members of the New Mexico Medical Society. This better babies contest is the first serious public effort of the Albuquerque Women's club, and the federated women's clubs of the state to secure intelligent co-operative effort for more competent care of children in New Mexico.

There are plenty of comfortable rooms in Albuquerque hotels which may be had by making reservations now. Thomas F. Binkert, Secretary to the state fair commission, will gladly attend to all early reservations.

The New Mexico Medical Journal has from time to time called the attention of its readers, particularly those who are members of the New Mexico Medical Society, to the necessity of patronizing its advertisers when anything necessary can be purchased from

those who help us with their patronage. To show that we are not alone in this request we submit for the perusal of our readers a few clippings from other State Journals and we earnestly ask the attention of our readers to both their letter and spirit.

The reason that business firms in other states advertise in the Journal is because they believe they have goods which our people would like to buy. They spend money to bring the market to us. This saves us money in going to, or trying to find the market. Ought we not to appreciate this and buy goods from them?—(Arizona Medical Journal.)

We must be able to convince prospective advertisers that we can give them results. Failing to do this, we cannot reasonably expect advertising patronage. Advertisers are all from Missouri. They want to be shown.—(Journal of the Arkansas Medical Society.)

Are you thinking of buying anything? If so, look through the advertising pages of The Journal and see what firms carry the articles you want -and advertise in your Journal. Go a step further than that and when you buy, let the firm know that you saw their advertisement in your Journal and that your patronage is a result. We do not permit the advertisement of any firm or any article that is not reliable to appear in our advertising pages, therefore you may depend upon them as a safe and sound business directory. -(California State Journal of Medicine.)

This is your Journal. The advertisers help support it. As they grow in number the journal will grow proportionately in size and value. Write to these people for more detailed information about the things they promote. Tell them that you saw their announcements in a journal the character of which places them above suspicion.—(Colorado Medicine.)

Our advertisers, by their patronage, help to support The Journal, and make its successful publication possible. In return they expect, and rightfully, a fair return for their money. Every dollar spent by a member of the Medical Association of Georgia with advertisers in our Journal, in preference to non-advertisers, is a dollar spent in advancing his own personal advantage, for he has contributed something indirectly to the betterment of his own property.—(Journal of the Medical Association of Georgia.)

We ask the cooperation of all the members in the effort to give the best State Journal, and to keep its pages clean. Read the advertising pages as carefully as you do the rest of The Journal. You will find them interesting. As you have occasion, use the goods mentioned herein; tell the advertiser where you saw the advertisement. If your patients need institutional care. find the institutional announcement in these pages. If you desire furniture or automobiles, look up our advertising. Do you need a consultant? Look up our advertisers.—(Journal of the Iowa State Medical Society.)

If you wish The Journal to become

self-supporting, then at every opportunity give the advertisers your preference. You can depend on the pharmaceuticals advertised in The Journal, because to be there they have to be approved by the Council on Pharmacy and Chemistry. Therefore they are dependable.—(Journal of the Kansas Medical Society.)

"Quacks" don't advertise in The Journal. All our advertisements are trustworthy. Buy from the advertisers who buy space in your Journal. Reciprocity is not only desirable, it is a good business principle.—(Bulletin of the Medical and Chirurgical Faculty of Maryland.)

We ask but fifteen minutes of your time to peruse our advertising pages carrying none but honest advertisements from reliable business firms and manufacturers. Here and there you will undoubtedly note something that you need and intended to purchase. Send your order to those who patronize your Journal and also tell them why you are doing so. These firms will accord you courteous and honest treatment.—Journal of the Michigan State Medical Society.)

In writing to advertisers, use the specific address therein given. The postoffice box, or the number of the street, may be the "key" which signifies that you saw the announcement in the New York State Journal. Give the Journal the credit for putting you in touch with the advertiser. Reciprocate our favor to you.—(New York State Journal of Medicine.)

The matter of unethical, low-grade

and inferior producers is not carried in our pages. They have not enough money to buy our space. Every effort is made to keep our advertising pages as clean as the cleanest, and it is the policy of your Council to maintain high-class advertising pages or none; so when you read an advertisement in your Journal you may be assured that the offering is ethical and reputable and that you have no good right to go elsewhere if they can serve your wants.—(Journal of the Oklahoma State Medical Association.)

Our readers can help us materially to firmly establish the Journal in a profitable advertising business by making it a practice to give the same attention to our advertising pages that they give to our reading pages and let the advertiser know it. . . It is up to the advertiser to have what the reader wants and to convince the reader that he wants it; it is our part to supply the medium for this publicity.— (Texas State Journal of Medicine.)

The man who advertises is not a philanthropist seeking for opportunities to give away his money; he is a business man attempting to enlarge his list of acquaintances and customers. If a journal is to obtain and keep the best grade of advertising, the advertiser must have some evidence that his "announcements are being read."

This Journal belongs to the State Medical Society, and every member owns a share in it and is interested in its financial success. Why not help things along by looking over the advertising pages when you are in need of surgical or medical or orthopedic or automobile supplies of any kind to see

who is anxious to supply your wants? And when you write to inquire about anything mention The Journal, your Journal.—(Wisconsin Medical Journal.

To all the above we say "Amen" and now just a word in conclusion. With this issue the term of office of the present managing editor ends. does not know what the Council of our State Society intends to do in the matter of the election of a managing editor for the ensuing year, but he feels certain of one thing and that is that the Journal of your society—the New Mexico Medical Journal—is clean and honest in its advertising pages. There is just this thought in closing: the future of this Journal, as indeed the future of all state journals, depends absolutely upon the measure of support that is given to it by the members of the State Society and this support MUST BE made to cover the return of favors wherever possible in the advertising pages.

At the Third Annual Meeting of Alienists and Neurologists of the U. S. held under the auspices of the Chicago Medical Society, for the purpose of discussing Mental Diseases in their various phases, July 17th, 1914, the committee on "The Causative Forces of Mental Deficiency" reported the following resolutions, which were unanimously adopted:

"We feel it unwise at this time to make any recommendations in regard to constructive legislation owing to the lack of proper evaluation of available data as to causes and sources of mental deficiency.

"We do, however, recommend and

urge regulation of mental deficients and the furthering of investigations as to the causes and sources."

The committee on the Prevention of Insanity, reported the following resolutions, which were unanimously adopted:

"Whereas, it is well recognized by alienists and neurologists the world over that certain major factors are the chief cause of physical conditions accompanied by mental derangement and deficiency, and

"Whereas, these major causes are largely, if not wholly, controlable and eradicable, and

"Whereas, these major causes are alcoholism, habit producing drugs, venereal diseases, work in unsanitary and unhygienic surroundings, and hereditary influence including the immigration of the physical and mental unfit.

"Therefore, Be it Resolved, First: That we recommend to the proper state authorities, the absolute control of the sale of alcohol until such time as actual prohibition be enacted.

"Second: That the sale of all habit inducing drugs be strictly regulated in all states of the Union.

"Third: That municipal or state control of venereal diseases be established, with proper treatment for indigent patients, to the end that the spread of syphilis and gonorrhea be prevented.

"Fourth: That proper, special hospitals for the care and treatment of alcoholism and drug addictions be established.

"Fifth: That Municipal, state and national inspection of labor conditions be regularly maintained and child labor abolished.

Sixth: That no known defective dangerous to himself and to others, should be permitted to have unrestricted liberty.

"Seventh: That adequate teaching of the principals of heredity and sex life be initiated and fostered in the home with the view to its introduction into the curricula of schools—above the grammar grades, this instruction to be given to the sexes separately.

"Eighth. That the various states pass reasonable and universal marriage laws, that will be reciprocal, in preventing the marriage of the physical and mental unfit.

"Ninth: That a Psychopathic Laboratory be connected with the Criminal Courts, Common Schools, Railroads, Transportation Companies and Public Service Utilities, responsible for the actual safety of the general public should have their employees regularly examined as to their physical and mental fitness.

"Tenth: That, inasmuch as state, county and city public health institutions should have as their superintendents, men of highest qualifications, who may devote their best efforts to their tasks, we recommend that all such positions be subject to civil service examinations.

"Eleventh: That in addition to the above, we recommend a nation-wide campaign of education conducted through the public press, university and medical schools, boards of health, state, county and city boards of education, women's clubs and other proper educational mediums, upon the true significance of the development—physical, mental and moral—of the individuals and the race and finally, we recommend that a committee be appointed

to promote the enactment of the above resolutions."

The committee on "Alcoholism as a Causative Factor of Insanity" reported the following resolutions, which were unanimously adopted:

"Whereas, In the opinion of the meeting of Alienists and Neurologists of the United States in convention assembled, it has been definitely established that alcohol when taken into the system acts as a definite poison to the brain and other tissues; and

"Whereas, The effects of this poison are directly or indirectly responsible for a large proportion of the insane, epileptics, feeble-minded, and other forms of mental, moral and physical degeneracy; and

"Whereas, The laws of many states make alcohol freely available for drinking purposes; and therefore cater to the physical, mental and moral degradation of the people; and

"Whereas, Many hospitals for the Insane and other public institutions are now compelled to admit and care for a multitude of inebriates; and

"Whereas, Many states have already established separate colonies for the treatment and re-education of such inebriates, with great benefit to the individuals and to the commonwealths."

"Therefore Be it resolved that we, unqualifiedly, condemn the use of alcoholic beverages and recommend that the various state legislatures take steps to eliminate such use; and be it further

"Resolved, That we recommend the general establishment by all states and territories of special colonies or hospitals for the care of inebriates; and

"Resolved, that organized medicine should initiate and carry on a systematic, persistent propaganda for the education of the public regarding the deleterious effects of alcohol; and

"Be it Further Resolved, That the medical profession should take the lead in securing adequate legislation to the ends herein specified."

The committee on "Syphilis as a Causative Factor of Insanity," reported the following resolutions, which were unanimously adopted:

"Whereas, Syphilis is responsible for a large percentage of all insanity and mental deficiency,

"Be It Resolved That:

"First: Health Departments, (Municipal and State) should be equipped to make laboratory examinations for venereal diseases.

"Second: All Hospitals for the Insane should be equipped to make laboratory examinations for venereal diseases.

"Third: Hospitals and Dispensaries for the treatment of venereal diseases, should be provided.

"Fourth: Physicians should be compelled by law to report cases of venereal diseases, as is now done in other contagious diseases.

"Fifth: Applications for marriage should be required to furnish health certificates.

"Sixth: Lectures and Bulletins should be offered freely to the public regarding venereal diseases.

"Seventh: Newspapers should be requested to use their best influence to educate the people concerning venereal diseases.

"Eighth: Sex Hygiene should be taught in the public schools, above grammar grades, to the sexes separately."

The proceedings of the Third Annual Meeting of Alienists and Neurolo-

gists of the U. S. held under the auspices of the Chicago Medical Society, July 13-17th, 1914, will be published in one volume by the Illinois State Medical Journal. It will be in double column, the type and size of page the same as the Journal, and will comprise from four to six hundred pages. This book will contain the papers read and their discussions, together with resolutions adopted. The subjects covered are, Acquired Insanity, Epilepsy, Mental Defectives, Alcoholism, Abderhalden Test, Syphilis, etc.

The subjects of special interest are, First: The Abderhalden Test (Especially in Dementia Praecox) which embraces the technic for the preparation of the substrates, mixing of materials in the test tubes, and the interpretation of the reaction. This will comprise one of the most complete Symposiums on the Abderhalden Test, so far, printed in this country.

Second: Syphilis. The diagnosis of early Syphilis by the Dark Field Illuminator. The technic for obtaining and mounting the specimen for the Dark Field examination. The technic for staining specimens obtained from local lesions and mucous patches, and the method for preparing and staining tissues for sections, for microscopical examination.

The Wassermann Test: The technic for preparing materials, the method for mixing the same in test tubes, and interpretation of the reaction.

Third: The treatment of early and late Syphilis is up to date, and embraces the technic for mixing and the method of administering intravenously Salvarsan and Neosalvarsan, also the technic and method for Intra-Spinal administration of Neosalvarsan and Neosal-

varsanized serum in Locomotor Ataxia and Paresis.

The proceedings will be published and ready for distribution by October or November 1914. As only a limited number is left unsubscribed for, those wishing the publication will please send their subscription at once, as there will not be a second edition. The price of book is \$2.00. Send subscription to the Editor of the Illinois State Medical Journal, Dr. Clyde D. Pence, 3338 Ogden Ave.

"CONSTIPATION."

There is not an article on constipation which does not emphasize the failure of drugs to correct the condition and the basic importance of a diet which leaves a soft, bland residue in the intestinal canal. This is the foundation of the agar-agar treatment and of all dietaries designed to correct constipation.

The Advertising Bureau of the American Medical Association has been in correspondence and personal conference for months, with the manufacturers of a breakfast food, shaping their advertising to conform to the standards of the Bureau to the end that this food may be advertised in the state medical journals. The page ad of the Uucle Sam Breakfast Food Company in this issue is the result.

This article is presented as a food which answers all the requirements of a breakfast cereal in calory value and which, at the same time, corrects constipation through the bland residue left in the colon.

We ask the attention of our readers. Like all other articles advertised in this Journal, we stand back of what this ad says. It costs nothing to send

in their coupon and make a trial of this food. This company should receive a hundred of these coupons within the next two weeks.—(Arizona Medical Journal.)

Recent years have been marked by some important contributions to the theory and especially to the practice of surgical anesthesia, but there has lacked what is now quite needed for the further scientific development of this alongside the other departments of surgery—a journalistic medium and editorial mouthpiece.

The American Journal of Surgery will be expanded to meet this need. Beginning with the October issue and quarterly thereafter, this journal will publish a 32 page supplement devoted exclusively to Anesthesia and Analgesia.

This supplement will be a complete journal within a journal containing editorials, contributed articles and communications, abstracts, transactions of Societies and book reviews.

The supplement has been adopted as the official organ of the American Association of Anesthetists and the Scottish Society of Anesthetists and it will also publish the transactions of other like societies.

The editor of this supplement will be Dr. F. Hoeffer McMechan of Cincinnati, one of the founders of the American Association of Anesthetists and a charter member of the New York Society of Anesthetists.

He will be assisted by a staff of well known specialists in Anesthesia, among whom we would mention: Dr. James T. Gwathney, New York; Dr. Willis D. Gatch, Indianapolis, Ind.;

Dr. William Harper De Ford, Des Moines, Ia.; Dr. Charles K. Teter, Cleveland, O.; Dr. E. I. McKesson, Toledo, O.; Dr. Isabella C. Herb, Chicago, Ills., and Dr. Yandel Henderson of Yale University.

MEDICAL EDUCATION STATISTICS FOR 1914

The Journal A. M. A., August 22, 1914, the annual Educational Number, contains statistics of medical colleges, students and graduates for the year ending June 30, 1914. There were 16,502 students studying medicine this year, 513 less than in 1913. These are divided into 15,438 in the non-sectarian colleges, 794 in the homeopathic colleges, and 270 in the eclectic colleges.

There were 3,594 medical graduates this year, 387 less than in 1913, and 889 less than were graduated in 1912. The non-sectarian colleges had 3,370; the homeopathic had 154 and the eclectic had 70. This is the lowest number of graduates since 1890.

There are six less colleges than in 1913, the total now being 101, consisting of 87 non-sectarian, 10 homeopathic and 4 eclectic colleges.

Since 1904, 85 medical schools have been closed, 49 of which were merged into other medical schools and 35 became extinct. During the same time twenty-four new colleges were organized, making a net reduction of 61 colleges. This reduction in the number of medical schools is not restricting the opportunities of students to study medicine but is insuring them a better The large over-supply of training. medical schools in this country is giving way to a more normal supply of better equipped colleges. Of the 85 colleges which closed, 62 had been rated in Classes B and C by the Council on Medical Education of the American Medical Association. A large majority of those closed, therefore, were inferior colleges.

The marked reductions in the numbers of medical colleges, students and graduates is the reaction which would naturally follow the stupendous oversupply which this country possessed ten years ago. There would be no possibility of a scarcity of physicians in this country for years to come, even though the number of medical schools was again reduced by half.

Women students constituted 3.8 per cent of all students, and of all graduates, 3.4 per cent were women. Statistics show that college terms are being gradually lengthened. In 1901, 100 colleges had annual sessions of only 23 to 28 weeks each. Now only two colleges have such short sessions and about 95 per cent have sessions of from 31 to 36 weeks. In 1904 only 42 per cent of the colleges had sessions of 31 or more weeks.

Tabulated statistics of college fees, including matriculation, tuition and laboratory fees, show that 14 colleges charge \$100 or less for each student per year, 66 colleges charge between \$100 and \$175 per year, and 21 charge \$175 or more. Among the colleges charging fees of less than \$100 are several strong state university medical colleges. On the other hand eleven colleges listed by the Council in Class C charge fees from \$100 to \$175 per year for each student. Considering the fact that diplomas from Class C colleges are reported as not recognized as a qualification for license by thirtyone state licensing boards it would be poor economy to attend one of these

colleges because of the slight difference in fees charged. In some cases it is a fact that in the same time and for even less money the student could attend one of the best equipped colleges, the diplomas of which are recognized in all states. Financial reports from 65 acceptable medical schools show an average actual expenditure for each student for one year of \$435 while each student paid on the average in fees only \$122. This shows that to furnish an adequate training medical schools must have more income than is derived from students' fees, in the form of either state aid or private endowment.

Of the 101 existing colleges, 84, or over 83 per cent now require one or more years of work in a college of liberal arts for admission, and several others have announced the higher requirement to take effect in 1915. Of this number, 34 require for admission two or more years of collegiate work. That marked progress in this respect has been made, is shown by the fact that in 1904 only 4 colleges (less than three per cent) required any collegiate work for admission. Twenty state licensing boards have established the requirement for preliminary education of one or two years' work in a college of liberal arts, thereby supporting the better class of colleges which have adopted that standard. Seven of these require two years of collegiate work, the equivalent to that required by university medical schools for the six year combined course for the B. S. and M. D. degrees.

Of the 3,594 medical graduates in 1914, 807 or 22.5 per cent were also graduates of colleges of liberal arts as compared with 19 per cent last year.

This shows a decided improvement in the qualifications of those who are to practice medicine.

In recent years medical colleges have been greatly improved by the securing of endowments, new buildings, better equipped laboratories, better dispensary and hospital facilities and—most important—larger numbers of expert, full-time teachers. Improvements have been particularly rapid since the creation by the American Medical Association of the Council on Medical Education, in 1904.

LICENSES GRANTED.

East Las Vegas, N. M., Sept, 1, 1914. The Journal of the New Mexico Medical Society,

Las Cruces, N. M.

The following licenses were issued at the meeting of the Board of Medical Examiners, July 13, 1914.

Upon credentials.

Harvey E. Hall, graduate of Rush Medical College, 1890.

Wm. H. Cressy, Tulane University, 1914.

Wm. E. Johnson. Colorado University, 1913.

Wm. F. Shaw, Detroit College of Medicine, 1900.

Richard T. Speck, Hahnemann, Kansas City, 1910.

Francisco Armendariz, Mexico City University, 1888.

John F. Guthrie, Missouri Medical, 1885.

Fred M. Lapham, Baltimore Medical, 1911.

Joseph H. Hilton, Northwestern, Chicago, 1913.

Purdy S. Bailey, Tulane University, 1909.

George T. Barcklow, Louisville University, 1912.

Upon examination:

Edgar T. Lassetter, Southern Coll. of Med. & Surg., Atlanta, 1913.

W. E. KASER,, Secretary.

PROGRAM, THIRTY-THIRD

ANNUAL MEETING

Program of the Thirty-Third Annual Meeting of the New Mexico State Medical Society, Albuquerque, New Mexico, October 5th, 6th and 7th, 1914.

October 5th, 9 a. m.—Registration at secretary's desk.

9:30—Meeting House of Delegates. 10:30—General Meeting.

Invocation by Rev. Hugh Cooper.

Address of welcome—Mayor D. H. Boatright,

Address of welcome on behalf of the Bernalillo County Medical Society —Dr. J. A. Reidy.

Response to addresses of welcome— Dr. S. D. Swope, Deming.

President's Address, "Eugenics"— Dr. H. B. Kauffmann, Albuquerque.

Following the address of the president the work of the various sections will be in order.

SECTION ON PRACTICE. October 5th.

- 1. Chairman's address, Be a Man, a Sermonette—Doctor C. M. Mayes, Roswell.
- 2. Pellagra—Doctor M. M. Thompson, Logan.

To open discussion—Doctor C. F. Beeson, Roswell.

3. Report of a Case of Acetonemia —Doctor F. W. Noble, Tucumcari.

To open discussion—Doctor J. A. Reidy, Albuquerque.

- 4. The Physician and the Better Baby—Doctor Margaret Cartwright, Albuquerque.
- 5. The Relation of Tuberculosis to Child Welfare—Doctor L. S. Peters, Albuquerque.
- 6. Human Waste and the Children of the Necdy—Doctor C. E. Lukens, Albuquerque.

To open discussion on papers of Doctors Cartwright, Peters and Lukens—Doctor R. E. McBride, Las Cruces,

7. Herpes Zoster—Doctor J. R. Gilbert, Alamogordo.

To open discussion—Doctor E. B. Shaw, East Las Vegas.

8. The Pulmotor, with Demonstration—Doctor B. F. Stevens, El Paso, Texas.

To open discussion—Doctor W. W. Spargo, Albuquerque.

9. Infection with the Cercomona Hominis—Doctor Elliott C. Prentiss, El Paso, Texas.

To open discussion—Doctor J. W. Elder, Albuquerque.

10. Epidemic Diseases in the Southwest—Doctor T. C. Sexton, Las Cruces.

To open discussion—Doctor W. T. Joyner, Roswell.

11. Hysteria and Hysterical Conditions—Doctor Lewis C. Day, Albuquerque.

To open discussion—Doctor W. R. Tipton, East Las Vegas.

12. The Duty of the Physician to the Laity—Doctor W. G. Hope, Albuquerque.

To open discussion—Doctor J. H. Wroth, Albuquerque.

13. Abdominal Diagnosis, With Especial Reference to Pain—Doctor William R. Lockett, Carthage.

To open discussion—Doctor William Howe, East Las Vegas.

SECTION ON SURGERY AND THE SPECIALTIES.

October 6th.

1. Chairman's Address—Doctor D. H. Carnes, Albuquerque.

2. Sarcoma of the Kidney, Report and Specimen—Doctor S. D. Swope, Deming.

To open discussion—Doctor James Vance, El Paso.

3. Some Interesting Cases with Erroneous Surgical Diagnosis—Doctor H. R. McGraw, Denver, Colo. (Fraternal Delegate, Colorado Medical Society.)

To open discusion—Doctor P. G.

Cornish, Albuquerque.

4. Bismuth Paste Poisoning, Report of a Fatal Case—Doctor C. E. Yount, Prescott, Arizona. (Fraternal Delegate, Arizona Medical Society.)

To open discussion—Doctor T. C.

Sexton, Las Cruces.

5. Intussusception in Children—Doctor James Vance, El Paso, Texas.
To open discussion—Doctor C. E.

Yount, Prescott, Arizona.

6. Principles of the Growth of Bone and their Practical Application, with lantern slides and specimen—Doctor W. L. Brown, El Paso, Texas.

To open discussion—Doctor H. R.

McGraw, Denver, Colo.

7. Trachoma and its Treatment—Doctor T. F. Tannus, Santa Fe.

8. Surgical Treatment of Trachoma. lantern slide illustrations—Doctor E. R. Carpenter, El Paso, Texas.

To open discussion on papers on Trachoma—Doctor C. F. Losey, East Las Vegas.

9. Report of Three Cases of Blindness Due to Suppuration of the Nasal Accessory Sinuses, lantern slide illustrations—Doctor H. H. Stark, El Paso, Texas.

To open discussion—Doctor F. E. Tull, Albuquerque.

10. The Proper Treatment of New Growths—Doctor W. W. Waite, El Paso, Texas.

To open discussion—Doctor M. K. Wylder, Albuquerque.

11. The Perineum—Doctor William Howe, East Las Vegas.

To open discussion—Doctor W. R. Lovelace, Albuquerque.

SECTION ON TUBERCULOSIS.

Held jointly with the New Mexico Society for the Study and Prevention of Tuberculosis, in Sixth Annual Session, October 7th.

- 1. President's Address—Artificial Pneumothorax in the Treatment of Tuberculosis—Doctor A. G. Shortle. Albuquerque.
- 2. Artificial Pneumothorax in the Treatment of Tuberculosis—Doctor Earl H. Bruns, Fort Bayard.

To open discussion—Doctor Chas. E. Giese, Colorado Springs, Colo.

3. What the Large Corporations Are Doing to Stamp Out Disease in Their Plants—Doctor W. T. Brown, Wattrous.

To open discussion—Doctor Jos. S. Cipes, Albuquerque.

- 4. Diagnostic Difficulties in Tuberculosis, Illustrated by a Series of Cases—Doctor Chas. O. Giese, Colorado Springs, Colo.
- 5. Report of Two Cases of Actinomycosis of the Lungs—Doctor R. B. Homan, El Paso, Texas.

To open discussion of papers of Doctors Giese and Homan—Doctor David C. Twichell, Silver City.

6. The Effect of the Direct Rays of the Sun on Experimental Tuber-culosis—Doctor David C. Twichell, Silver City.

To open discussion—Doctor J. F. McConnell, Colorado Springs.

7. Abdominal Tuberculosis—Doctor C. M. Hendricks, El Paso, Texas.
To open discussion—Doctor R. B. Homan, El Paso, Texas.

8. Immunity and Tuberculosis—Doctor Jos. S. Cipes, Albuquerque.

To open discussion—Doctor E. C. Prentiss, El Paso, Texas.

9. The Optimum Dose of Tuberculin—Doctor J. F. McConnell, Colorado Springs, Colo.

10. Tuberculin Treatment of Tuberculosis—Doctor Leroy S. Peters, Albuquerque,

To open discussion on papers of Doctors McConnell and Peters—Doctor Earl S. Bruns, Fort Bayard; Doctor C. M. Hendricks, El Paso, Texas.

Members will please remember that the time limit of papers is twenty minutes and that five minutes is all that is given to any one person for discussion. As the program is rather full this rule will have to be strictly adhered to. It must also be remembered that all papers read before the society become the property of the society and are published in the Journal of the Society. Where requested, the society will permit joint publication in another journal, but this is not to be desired.

The committee on arrangements has provided an auto ride, buffet lunch, dance and cards for Monday evening, October 5th at the Albuquerque Sanatorium.

The annual banquet will be held on the night of Tuesday, October 6th, at the Alvarado Hotel. Members are requested to make their banquet reservations some time ahead in order that the committee may have some idea as to the attendance. Reservations for the banquet may be made by writing Doctor M. K. Wylder, Albuquerque. The price is two dollars per plate.

The arrangement committee of the Bernalillo County Medical Society is composed of Doctors M. K. Wylder, L. S. Peters and H. B. Kauffmann. Doctor Peters will attend to the reservation of rooms for members if written to.

Please register at the secretary's desk as soon as possible after your arrival.

LAW GOVERNING THE PRACTICE OF MEDICINE

IN NEW MEXICO

An Act to Regulate the Practice of Medicine in New Mexico and to Establish a Board of Health and Medical Examiners.

Be it enacted by the Legislative Assembly of the Territory of New Mexico:

Section 1. That a board is hereby established to be called The New Mexico Board of Health and Medical Examiners, which shall be composed of seven reputable physicians of known ability, who are graduates of medical colleges in good standing, as hereinafter defined, and have been registered practitioners in, and bona fide residents of the Territory of New Mexico for a period of five years next preceding the date of their appointment. The governor of New Mexico shall appoint the members of said board as other territorial officers are appointed, and shall

fill any vacancies occurring in said board, and may remove any member of said board who fails to perform his duties as hereinafter defined. of the members of said board so appointed shall hold their offices for a period of two years, and the remaining four members of the board shall hold their offices for a period of four years. and thereafter the members of said board, upon the expiration of the terms aforesaid, shall hold their offices for a period of four years and until their successors are elected and qualified. All members of said board shall qualify as now required of the Board of Regents of the University of New Mexico.

Sec. 2. Within sixty days after their appointment, the members of said board shall meet in the Capitol Building in the City of Santa Fe, New Mexico and organize by electing one of their number as president, one as vicepresident, one as secretary and one as treasurer, and thereafter regular meetings of said board shall be held in the said Capitol Building on the second Mondays of January, April, July and October in each year, and there shall be not less than two days' session at each meeting. Special meetings may be held at any time upon call of the president by written notice to all the members of the board, in which notice the object of the meeting shall be fully stated. A majority of the members shall constitute a quorum for the transaction of business, but a less number may meet and adjourn to some fixed date.

Sec. 3. The said board shall, upon the production of evidence satisfactory to it, license without examination any reputable person who is a graduate of

a medical college in good standing, as defined in this act, and who personally appears before the board at a regular meeting. A medical college in good standing for the purposes of this act, is defined to be one which has a standard as high as that required by the Association of the American Medical Colleges, and which has ample clinical facilities. Said board, at its April meeting in each year, shall prepare and cause to be printed and distributed for the information of those interested a copy of this law. The board shal not recognize any college which misrepresents its records, its teaching, its clinical facilities or as to its students or graduates. No college of any foreign country shall be recognized, except to the same extent as such foreign country recognizes American colleges, and when said foreign college is of good standing under the laws of New Mexico. No license shall be granted except by the board at a regular meeting, and every applicant for license shall appear in person before such board. Such boards may recognize any honorary or emeritus degree conferred upon any foreigner by any such college as fully and to the same extent as if the applicant were a regular graduate thereof.

Sec. 4. Such board shall also license reputable graduates of any reputable college in addition to those of other colleges in good standing, as defined by this act, who are of good moral and professional character and conduct, and have served an interneship in a good hospital, or who have taken a six months' post-graduate course in some institution having ample clinical facilities, or who have had three years or more of actual practice

Thirty-Fourth Annual

Management New Mexico S

\$20,000 — Twenty thousand dollars — \$20,000 In Purses, Prizes and Premiums

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ew Mexico State Fair

Fair Commission----Official

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THE New Mexico "Better Babies" contest; in which \$1500 worth of prizes will be awarded to the babies found nearest to perfection in physical health and standards, awards to be made upon the findings of a commission of physicians chosen from the members of the New Mexico Medical association. Here is an opportunity to study eugenics at first hand. More than 300 babies already entered in this Contest.

op Time At The Fair

since graduation. Provided, That all applicants for licenses, of the classes referred to in this section, shall be examined on the following, and such other subjects as the board may from time to time prescribe: Anatomy and Histology, 10 questions; Chemistry, 5 questions; Etiology and Hygiene, 5 questions; Physiology, 5 questions; Materia Medica, 10 questions; Therapeutics, 10 questions; Pathology and Bacteriology, 5 questions; Surgery, 10 questions: Physical Diagnosis, 10 questions; Obstetrics, 10 questions; Gynecology, 5 questions; Practice of Medicine, 10 questions; Medical and Turisprudence, 5 questions. An average of 75 per cent must be obtained at such examination by each applicant, and not less than 50 per cent must be obtained on each subject; the board shall allow an applicant credit marks of 5 per cent for five years of active practice; Provided, That such board may grant licenses without examination to those applicants who have been regular licensed physicians, in other states and territories, having qualifications and requirements equivalent to those required in New Mexico when such states and territories reciprocate with New Mexico. The president and secretary of said board are hereby empowered to administer oaths to applicants and all witnesses and others appearing before said board in any application or proceeding provided for herein. And any person making a false oath or affidavit before such president or secretary in any such proceeding shall be deemed guilty of perjury and be subject to the punishment provided for that crime. Whenever any applicant for license shall have been examined as hereinbefore provided, and shall have failed to reach the required percentage in not more than two of any of the subjects hereinbefore designated, the board may in its discretion allow such applicant another examination on the subjects in which he shall have so failed at its next regular meeting, and may in its discretion issue him a temporary license to practice medicine in the Territory of New Mexico until such next meeting and until his second examination shall have been passed upon and decided by such board.

Sec. 5. Every person holding a certificate of said Board of Health shall have the same recorded in a book provided for that purpose in the office of the probate clerk of the county wherein the practitioner resides, within thirty days after said certificate is issued, and the date of the recording shall be endorsed on said certificate. Said certificate or copy of the registration, must be again recorded in any county to which the practitioner may remove permanently. And the fact that no such certificate shall be found recorded in the county where any person practicing or offering to practice medicine shall be accepted by the courts as prima facie evidence that no such certificate has been issued, and shall throw the burden of proving that he has a certificate upon the defendant in any suit or prosecution begun against him for the violation of the provisions of this act.

Sec. 6. It is hereby made the duty of this board to refuse to license any person guilty of immoral, dishonorable or unprofessional conduct, and said board shall also revoke and annul any license which has been issued by said board, or any previous board, upon satisfactory proof being made to said

board that the holder or said certificate or diploma has been guilty of immoral, dishonorable or unprofessional conduct. The code of ethics as adopted by the American Medical Association shall apply to and govern all physicians and surgeons in this Territory heretofore licensed, or who shall hereafter be licensed, to practice medicine in New Mexico. Twenty days' notice shall be given in writing to the person accused of improper conduct, with a copy of the charge against him, requiring him on a day named to appear before the board and show cause why his license should not be revoked or cancelled. When any such license has been revoked or cancelled by said board, the said board shall send notice in writing under the hand of the secretary, which notice shall be filed for record and recorded in the book in which the physician's licenses are recorded, in the office of the probate clerk of the county in which the person, whose license has been revoked, resides. Any person whose certificate has been revoked or cancelled by said board, under the provisions of this act, who shall thereafter practice or attempt or offer to practice medicine in New Mexico shall thereby become guilty of a misdemeanor and shall be punished as provided in Section 9 of this act.

Sec. 7. For the purpose of this act the words "practice of medicine" shall mean to open an office for such purpose or to announce to the public or any individual in any way, a desire or willingness or readiness to treat the sick or afflicted, or to investigate or diagnose, or offer to investigate or diagnose any physical or mental ailment or disease of any person, or to suggest, recommend, prescribe or disease

rect, for the use of any person, any drug, medicine, appliance or other agency, whether material or not material, for the cure, relief of palliation of any ailment or disease of the mind or body, or for the cure or relief of any wound, fracture or bodily injury or deformity, after having received or with the intent or receiving therefor, either directly or indirectly, any bonus, gift or compensation. Provided, That nothing in this act shall be construed to prohibit gratuitous services in cases of emergency, or the domestic administration of family remedies, or women from practicing midwifery, and this act shall not apply to surgeons of the United States in the discharge of their official duties, and, Provided, further, that nothing in this act shall be construed so as to interfere with the practice of Osteopathy, Optometry, or Dentistry, as provided for by law.

Sec. 8. Each applicant for a license to practice medicine in New Mexico shall pay the secretary of this board a fee of twenty-five dollars (\$25.00) at the time of making this application.

Sec. 9. Any person who shall practice medicine, or who shall attempt to practice, without first complying with the provisions of this law, and without being the holder of a license entitling him to practice medicine in New Mexico, shall be punished by a fine not to exceed one hundred dollars (\$100.00), or imprisonment in the county jail not to exceed ninety days, or by both such fine and imprisonment, in the discretion of the court.

Sec. 10. One-half of every fine collected under the provisions of this act, shall be paid by the court in which conviction is had to the treasurer of the county in which the offense is committed, to be by him placed to the credit of the common school fund of such The other half of all such county. fines and all fees to be provided to be paid shall go to and be the property of said board, and shall be by the treasurer of said board kept in some bank designated by said board. He shall give bond to the board in the sum of one thousand dollars (\$1,000.00) conditioned for the faithful performance of his duties as treasurer, and that he shall pay over any and all sums of money received by him as such upon the proper order thereof. Such bond shall be given by some fidelity or surety company authorized to do business in this Territory, and the premiums therefor shall be paid by the board as one of its necessary expenses. All the expenses of the members of said board necessarily and properly incurred in attending the sessions of said board, and for necessary supplies, shall be paid out of the funds of said board upon the order of the president, countersigned by the secretary of the said board. The treasurer of the board shall keep a correct and itemized account of all moneys received and disbursed, and shall make a report to the board at each meeting. The secretary of said board is required to report the doings and proceedings of said board, together with the amount of all moneys by it received and disbursed and on what account, with items, on the first day of December of each year, to the governor of New Mexico.

Sec. 11. Said board is hereby authorized and empowered to make all necessary rules and regulations for carrying out the provisions of this act.

Original Articles

A CASE OF ADIPOSIS DOLO-ROSA.

CHARLES TURNER SANDS, M. D., Las Cruces, New Mexico.

The following case is reported not because it presents any departures from the classical descriptions of the disease, but because the condition itself is sufficiently uncommon to be of interest.

Adiposis dolorosa was first described by F. X. Dercum of Philadelphia in 1888 and is sometimes known as "Dercum's Disease." The etiology of the condition is obscure. Pathologic changes in the thyroid gland were found in six out of seven cases examined, upon which is based the empiric treatment of the disease by thyroid extract. Three forms of the disease have been described: the lipomatous; the localized fatty; and the diffuse fatty. The present case is of the lipomatous variety.

Patient. Mrs. K—. American, married, aged 54, housewife, consulted me on June 28, 1913, complaining of pain in the right clavicular region associated with localized swelling.

Present Illness. Five years ago patient developed pain at the angle of the right scapula. Pain was sharp and stabbing in character and was made worse by motion of the arm. Coincident with the development of the pain a firm lump, "about one half the size of a hen's egg," appeared at the angle of the scapula. There was no discoloration; the lump was painful on pressure. The lump persisted for some months, became softer and finally dis-

appeared, a dull ache remaining in the shoulder. Six months ago a swelling the size of a hen's egg developed on the anterior chest wall immediately below the right clavicle. Swelling is soft, elastic, and slightly tender and is associated with sharp, burning, neuralgic pain extending into the axilla and down the arm. Pain is worse on movement and deep breathing.

Family History. Father living and well. Mother dead (18), childbirth." Mother's family all died at an early age. Six half-brothers and one half-sister living and well. No history of hereditary diatheses in family.

Past History. Normal, healthy infancy. Usual diseases of childhood with prompt recovery. Enteric fever fourteen years ago, good recovery. Measles followed by jaundice twelve years ago, good recovery. Suffered from malaria for several years. Has had nine children and two miscarriages; all her confinements were normal. Patient passed through menopause nine years ago, this was characterized by menorrhagia, sometimes lasting for twelve days, was at no time associated with pain.

Present Condition. Patient appears fairly healthy and well nourished. Height, 5 ft. 4 in. Weight, 121 pounds. Temperature, 98.2 F. Pulse, 76, regular. Respiration, 18. Blood-pressure, S. 130 mm. Hg., D. 100 mm. Hg. Urine contains a trace of albumen and a few hyaline casts. Pupils normal. Thyroid not enlarged. Heart and lungs apparently normal. Abdomen negative. A soft, elastic, sharply circumscribed tumor directly below right clavicle, slightly sensitive to pressure. No edema nor discoloration over or in the neighborhood of the mass. Patient

says her general health is fairly good, and complains of no symptoms other than those associated with the local condition.

Treatment and Course. Thyroid extract was prescribed, beginning with 2 grains daily and increasing the dose to 6 grains daily. Three weeks after the beginning of treatment the pain and tenderness had disappeared and there was marked improvement in general health. There was no apparent change in the tumor mass. At this time the patient removed to another part of the state and passed from under my observation. Three months later her husband reported that the patient had had continued freedom from symptoms and that there had been some diminution in the size of the tumor.

REPORT OF A CASE OF EPILEP-SY TREATED WITH CRO-TALIN.

(With Notes and Observations Made by the Patient.)

R. E. McBride, M. D., Las Cruces, New Mexico.

The following case report is made, not so much for the positive value as for the negative value. The patient was a particularly observant, well educated and intelligent lady who has been subject to epileptic seizures for a number of years.

The value of crotalin as an anti-epileptic has been much discussed in the literature of the past two years and I do not deem it necessary to go into any of the details of the case nor into the details of the theory of the originator of this method of treatment. Suffice it to say that this was (and is) an ordinary case of epilepsy which had been given a fair show at relief by all of the older methods of treatment before the crotalin injections were begun. The last state of the patient differs in no respect from the condition as it was when the injections were first begun.

The notes following are just as they were made by the patient herself:

Nov. 20th, 1913—

Injection in left arm of 1-800 gr., given at 1:45 p. m. First sensation that of a deep, painful bruise. This increased in intensity for some minutes, a feeling of sortness and stiffness spreading downward to the hand and fingers, which seemed numb for some little time. This sensation gradually grew less and by 3 p. m. was much decreased, the hand and forearm gradually regaining the temperature of the other hand, after being decidedly cool.

3 p. m. Feeling of bruise, stiffness and numbness, while still present, slight.

Usual afternoon nap between 3 and 4. Awoke at 4 to find about the same degree of pain and stiffness in the arm as at 3, but a little increased in the region of the puncture.

5 p. m. Decided soreness about the puncture, with occasional aching of whole arm, especially in hand, though with slight pain now and then in region of the shoulder.....the whole a discomfort easily sustained.

7 p. m. Soreness about the puncture more severe. Whole arm aching slightly.

9 p. m. Very painful to the touch about the puncture.

Slept as usual. Pain slight in the arm throughout the following morning, a point midway between elbow and shoulder on outer side of arm being almost as sensitive as region about the puncture—neither at all severe.

From this time on gradual decrease of sensations of pain and burning, though felt slightly at intervals for several days.

Nov. 29th, 1913—

Injection of 1-600 gr. in right forearm at 10:30 a. m. Same sensations of bruising, stiffness and numbness as at time of first injection though considerably less severe. Gradual increase, but no great discomfort until about 1 p. m. From that time on pain very severe about the puncture, great also in hand, gradually spreading into upper arm, with some swelling and stiffness also in forearm and hand, more than at first injection. From about the middle of the afternoon pain and general discomfort gradually decreased and at 8 p. m. slight.

Very slight discomfort on following morning and all pain gone in entire arm by evening of the 30th.

Took one "phenolax wafer" on retiring.

Dec. 1st had a very severe epileptic attack at 5:30 a. m. and four severe attacks and one minor the following night.

Dec. 11th, 1913-

Third injection in left arm of 1-600 gr. at 4:30 p. m. Sensations of pain and numbness less severe than before but increasing gradually until about 6 p. m. From that time decreasing. Slept comfortably. All pain and discomfort gone by morning.

Dec. 18th—Severe epileptic attack

at 11:30 p. m. Another severe attack the following night at 10:30 p. m. In both these attacks the customary resulting discoloration beneath and about the eyes was lacking.

Dec. 22nd—Minor attack at 5:45 a

Dec. 20th, 1913—

Fourth injection in right arm of 1-400 gr. at 10:30 a. m. Immediate sensations painful but not increasing much in intensity.

Pain gone the following morning. Dec. 30th, 1913, 11 a. m.—

Fifth injection, left arm, 1-300 gr. Pain very severe, more stiffness and swelling of hand and arm than heretofore. Although diminishing gradually pain was felt until about noon of following day.

Jan. 7th, 1914—Severe epileptic attack at 6:15 p. m.

Jan. 17th, 1914—Sixth injection of 1-300 gr. at 11:00 a. m. Same results as heretofore but in less severe form as regards pain and numbness. Swelling about puncture greater.

Jan. 30th, 1914—Severe epileptic attack at noon, with three severe attacks the following night at 10:00, 12:10 and 3:25.

Jan. 31st to Feb. 6th, menstrual period, slight discharge.

Feb. 7th—Seventh injection in left arm of 1-300 gr. at 11:30 a. m. Slight pain at time of injection, but increasing in severity with passage of afternoon. Considerable swelling of hand and lower arm. Pain gone by noon of the 8th.

Feb. 8th—Slight epileptic attack at 1 p. m. No loss of consciousness.

Feb. 14th—Severe epileptic attack at 10:30 a. m.

Feb. 16th—Slight epileptic attack at 2:45 a. m.

Feb. 15th to March 5th, inclusive, menstrual period, profuse discharge.

March 4th—Jagged rings of light before the eyes, took three five grain pellets of strontium bromide at 10 a. m., repeating dose in evening and again three times the following day.

March 7th—Eighth injection of 1-200 gr. at 11:30 a.m. Pain acute and swelling and stiffness of arm pronounced, but all gone by the following morning.

March 31st—Flecks of light before the eyes at 11 a. m. Took three 5-gr. pellets of strontium bromide.

April 1st—11:30 p. m. Severe attack.

April 2nd—12:40 a. m., 2:20 a. m., 3:20 a. m. Severe attacks.

April 2nd—12:00 midnight, minor attack.

April 3rd—Took strontium bromide. April 4th—Ninth injection of 1-200 gr. crotalin. Pain and swelling in arm pronounced but disappearing the following day.

April 15th—Two tablets, 5 gr. strontium bromide, 3 p. m.

May 8th—Severe attack epilepsy, 11:45 p. m.

May 9th—3 tablets strontium bromide, 5 gr. each.

May 9th—Tenth injection of 1-200 gr. crotalin. Pain and swelling somewhat less severe than formerly.

May 9th—Severe attack at 3:30 p. m., another at 9 p. m., and a slight one at 10:15 p. m.

May 29th—Severe attack at 3:15 p. m. Took strontium bromide.

May 30th—Severe attack at 3:45 a. m.

Abstracts

Intestinal Stasis.

The treatment of intestinal stasis, commonly called constipation, is reviewed by W. A. Bastedo, New York (Jour. A. M. A., Aug. 29, 1914). The recognition of the fact that poisoning may result therefrom has, he says, made it the subject of renewed interest. It is not necessarily a condition of infrequent defecation; it may be even accompanied by diarrhoea or greatly relieved by a weekly cathartic. The measures of relief he suggests are habit formation of daily stools and prompt response to desire to defecate,, exercise and massage, when done by some one with general anatomic knowledge and some knowledge as regards the general abdominal condition of the patient. It should not be done if there is any suspicion of duodenal ulcer, appendicitis or other inflammatory condition in the abdomen. Proper support of the abdominal walls and an inelastic support around the body from navel to symphysis should be applied the first thing in the morning and worn until bedtime in cases of intestinal stasis accompanying ptosis and weakness of the abdominal walls. In addition to this, any laxity in the pelvic floor should be attended to. So far as effects of diets on bowel movements are concerned, they might be classed according to the chemical substances they contain, such as sugars and fruit acids, by their structural parts, by unabsorbed oils and fats and the chemical irritation produced, etc. Simple undereating is a cause of constipation, and the same is true of too ready digestion; in either case the residue is insufficient. The various constituents of food, such as fibrous tissue, fats, acids and salts, are enumerated. A dry diet favors stasis, but

Bastedo reports the effects of an experiment of administering 8 ounces of water each hour in two normal cases and six cases of nephritis. In neither of these were the bowels specially affected, showing that large quantities of water do not act on the bowels. With a too dry diet, however, constipation is common. Of the medicinal agents which give bulk and soft consistency to the feces, the most commonly used are agar-agar, liquid paraffin and small, not expulsive, doses of the saline cathartics. As regards the liquid paraffin, it is sometimes inconvenient on account of its oily nature by the passing down as a free oil without mixing with the food contents, and sometimes it is not tolerated by the stomach. We do not yet know whether an unrefined article is harmful if used internally, but it is wiser, he thinks, to use the best. Saline cathartics should not be used in expulsive doses too often. Bastedo sums up the treatment of chronic intestinal stasis as follows: "Regularity of defecation, measures to imprové intra-abdominal pressure, measures to increase peristalic activity, and measures to increase the bulk and softness of the colon contents. In the average case attention to habits of life and to the amount and kind of food, and the administration of a softening agent or a very mild laxative will be effective in overcoming the stasis, and, therefore, thetoxemia. In severe cases the addition of an oil enema at night may work a marvelous change for the better. In these chronic cases the drastic cathartics should be omitted from use. If measures such as those spoken of, when carried out thoroughly, do not overcome the stasis and the toxemia, the question of surgery should be seriously considered."

Celluloid Splints.

The use of celluloid splints in the treat-

ment of paralytic diseases, especially in the after treatment of acute poliomyelitis is strongly advocated by G. W. Robinson, Kansas City, Mo. (Journal A. M. A., Aug. 29, 1914). In his opinion the paralyzed limbs should be fixed in the normal position of rest and held in such a position by a splint which gives sufficient support to enable the patient to walk during the stage of repair, thus applying a physiologic stimulus to aid in the recovery of the muscle. All cases of paralyses of the legs are suitable for splinting, he says, except those with complete loss of power in the psoas and iliacus group and in the glutei; also those in which the back, lumbar and abdominal muscles are much affected. But if these alone are weak with little involvement of the legs, a spinal jacket is frequently helpful. The extent of the splint should vary with the extent of the paralysis. If the limb is extensively paralyzed the splint should encompass the entire leg as far as the tuber ischii behind, the trochanter on the outer side and the ramus of the pubes on the other. If limited to the muscles below the knee a splint reaching the knee will suffice. Splints are also convenient in some other conditions like tabes, hypertonia, Charcot's disease, etc. Robinson gives full directions for making the celluloid splints, especially the first taking of the negative cast. The celluloid splints should be worn next to the skin, as a stocking will force it out of place. It should be applied while the patient is still in bed, laced on and worn day and night, but removed twice a day for massage and passive movements. The patient should be encouraged to get up and walk as soon as possible and this can be done in the average case at the end of the first month.

Appendicitis.

Archibald MacLaren, St. Paul (Journal A. M. A., Aug. 29, 1914), publishes the results of a study of 300 cases of acute suppurative appendicitis, with special reference to pelvic complications. He has peen in the habit of noting the quantity of pus in every case, and he credits a decrease in the mortality of his later cases to rectal drainage, which he considers a life-saving measure. The case which first called his attention to the need of this was that of a boy who died complaining bitterly that the nurse was inattentive to his bowels. After death the sphincter was found dilated to an inch in diameter by the anterior wall of the rectum, pressed down by a large pelvic abscess. Since then MacLaren has not considered his examination in any inflammatory abdominal condition complete without examining the rectum. At first he used rectal puncture and drainage only in cases that had been operated on for acute appendicitis. The accumulation in the culdesac would generally show itself by night pain, high temperature and pulse, and beginning aseptic appearance about six days after operation. Many times it was found distended with pus, even with a large-sized rubber tube extending from the wound or from an anterior wall stab into the culdesac. Owing to adhesions pelvic abscesses do not always drain with the ordinary drainage method and septic absorption may go on with them throwing out a regular stream of pus. The following are his conclusions: "1. The successful treatment of acute appendicitis depends on the time when the patient can be operated on after perforation, the earlier the better. 2. We should continue to impress this fact on the laity. 3. Drainage must be complete and for a certain percentage of cases rectal drainage is a most efficient measure. 4. After

operation has been performed we must not forget these patients. The method of attack is not so important as eternal vigilance, constant watching and frequent rectal examinations, which should be made, if in the future we are to save some who would have been lost in the past."

Appendicitis.

J. E. Moore, Minneapolis (Journal A. M. A., Aug. 29, 1914), says the last word will not be spoken concerning appendicitis until it is no longer ever fatal. Little has been added to our methods of diagnosis. The average case is the easiest of all abdominal conditions to recognize, but there are exceptional cases that may puzzle the ablest diagnostician. The most common mistake is to make a diagnosis of appendicitis when it does not exist, but refinements in diagnosis should not be undertaken before operation because they may lead to disastrous delay. The prognosis is improved each year, but there is still room for more improvement. The present mortality rate is near 5 per cent, and with skilled hospital surgeons it is less. His rule has been, during the last few years. to operate as soon as the diagnosis is made, but he would not recommend this to the unskilled operator without hospital facilities. In the Minnesota University Hospital they have had eighty-seven patients with acute appendicitis operated on with a mortality of but 3.4 per cent. All the deaths occurred while they were occupying a frame building as a temporary hospital. With the last forty-four cases in the new hospital there have been no deaths. Christian Science is responsible for more deaths from appendicitis than are operations. Moore is positively opposed to the removal of the appendix in every case of appendicitis. He has removed the appendix in about 95 per cent of his cases, but in a few cases, about one in twenty, it was better to leave it as safer than its removal. That it may call for another operation was unimportant compared to the danger to life. should be operated on after an acute attack to avoid further attacks as a routine practice, and this should be insisted on in child-bearing women. Appendicitis in a pregnant woman is more than twice as dangerous, and two lives are liable to be sacrificed. The exact method of removal of the appendix and treating the stump is immaterial so long as it is skillfully done. In suppurative cases drainage is important and often improperly carried out. Moore's personal practice is never to use gauze for drainage unless it is surrounded by a rubber tube or rubber tissue, and then only for a few hours. Neither does he use the sitting posture for the patient after operation. Large-sized rubber tubes should be passed to the bottom of the pelvis, and they need not drain down hill, for the intra-abdominal pressure will care for that.

Anaphylaxis.

H. L. Underwood, La Grande, Ore., reports a case of very extensive burn as of interest partly because complete recovery followed in spite of its extent and systemic effects, and partly from the appearance of certain phenomena analogous, if not identical with anaphylaxis. The patient, a healthy man, aged 25, was burned from the explosion of a kerosene lamp, from his shoulder to his knee, over, as estimated, about one-half the surface of his body and largely to the third degree. Local treatment and stimulants as required were given and skin-grafting begun as early as the condition warranted, a number of persons contributing. The earlier grafts took readily and throve but the later ones began to melt, as did also some

of the old grafts and the healing process stopped over still other surfaces. The patient's temperature rose irregularly. The urine became bloody. Egg grafts were Lext tried and at first took well. The first was applied to a burn in the groin and scarlet red was used to stimulate its taking. This was used in 8 per cent ointment with boric acid or dusted in powder on the grafts and wound margins with good effect throughout the rest of the treatment. A little later these grafts also failed as did also human grafts; only one very small one from the patient's mother throve. He therefore relied on scarlet red and the patient's own powers of epithelization. It was especially notable that the graft from the patient's sister did better than those from other persons at this time and the one from the mother throve perfectly. One practical lesson from the burn, Underwood says, would seem to be that scarlet red and stimulation of the epithelium are of prime importance in the treatment of burns. The patient was under his constant care for nine months and somewhat to his surprise made a perfect recovery without contractures or impaired motion, and with no appreciable scars.

Twelfth Annual Summary of Fourth of July Injuries.

For the twelfth consecutive year The Journal A. M. A., Aug. 29, 1914, in a special article gives its summary of deaths and injuries resulting from Fourth of July celebrations. Blanks sent out to hospitals, etc., for statistics were returned in many instances with the report that no cases were treated. The lessening of the cases of tetanus—three in 1914 as compared with 150 in 1909—encourages the hope that deaths from this needless cause will soon cease. The three tetanus patients were all under the age of 15. Cases oc-

curred in three states, no case being in a state which reported deaths from tetanus in 1909. The injury in two cases was from blank cartridges, in the third from gunshot. Reduction in cases of tetanus from other causes, due, doubtless, to the increased use of antitoxin, continues, sixteen cases being reported this year as against thirty-two in 1913. Thirty-seven deaths occurred from various forms of fireworks, a total of forty, eight more than in 1913, and ninety-one less than in 1910. The increase over last year possibly indicates a relaxation in the strict enforcement of the restrictions of last year. Sixteen persons, mostly small children, were burned to death from the supposedly harmless sparklers. Casualties this year were 1,506, an increase of 343 over 1913 and of 512 over 1912. Pennsylvania still leads with the largest number of casualties. Three persons totally lost their sight, thirteen lost one eye each, sixteen lost legs, arms or hands, and sixty-seven lost one or more fingers. Most of these injuries were due to the giant firecracker. Many injuries were caused by stray bullets from recklessly used firearms. Summaries and tabulations are given, by states, of deaths and casualties. The responsibility for these injuries, in the great majority of instances clearly rests with city governments, and it is their duty to decide whether this maining and these deaths of children shall continue. The enforcement of restrictive ordinances is difficult and requires constant vigilance on the part of the police. Prohibitive ordinances are necessary. The increase in number of killed and injured is somewhat discouraging as indicating a relaxation of enforcement ordinances. The growing public interest in a safe and sane Fourth, however, is encouraging. The use of fireworks in Fourth of July celebrations should be strictly prohibited. Forty .rsons killed and 1,466 maimed and wounded is a poor way to show patriotism or thankfulness for the Declaration of Independence. The question is asked: Is riot and murder or rowdyism the only way in which we can show our patriotism? These evils can be done away with if city officials continue prohibitive measures.

The Radio-Activity of Saratoga Springs Water.—An estimate of the radio-activity of Saratoga Springs Water, made by the U. S. Bureau of Mines, shows that the activity is due in the main to radium emanation, which is therefore readily lost, and not to dissolved radium salts. The total activity of the waters is rather low, that of he Crysal Rock spring, though not exceptional, is considerably above the average. The activity of different springs varies widely, some being more than twenty times as active as others. A similar variability is known to exist at Hot Springs, Ark., but only the vaguest information has been made public by our government. (Jour. A. M. A., Aug. 29, 1914, p. 788 and 795.)

Radium in Cancer.—Radium can be used successfully to destroy growths on the surface whose entire extent can be exposed to its energy. Extensive growths involving deep structures and disseminated growths are beyond its control, and there is no reason to believe that they will ever be brought within its control. The effects and the limitations of radium in the treatment of cancer are the same as those of the Roentgen ray. (Jour. A. M. A., Aug. 29, 1914, p. 787.)

Pertussis Vaccine.—The Bordet-Gengou bacillus is recognized as the cause of whooping cough and a vaccine prepared from it is used with success, although it is the general experience that when a child is already in the stage of incubation, the

vaccine will not prevent the development of the disease. (Jour. A. M. A., Aug. 29, 1914, p. 796.)

Scarlatina Vaccine. — The so-called scarlatina vaccine is said to consist of killed streptococci from scarlet fever cases. While the infectious agent of scarlet fever has not been established, the close association of streptococcus with scarlet fever has been considered a warrant for the use of antistreptococcus serum, and various vaccines prepared from this organism, in the treatment of scarlet fever. (Jour. A. M. A., Aug. 29, 1914, p. 796.)

New and Nonofficial Remedies.

Since publication of New and Nonofficial Remedies, 1914 and of the supplement to New and Nonofficial Remedies, 1914 (July 1, 1914), the following articles have been accepted for inclusion with "N. N. R."

Antiseptic Supply Co.—Stypstick Applicators, Alum 75 per cent.

Arlington Chemical Co.—Arlco Urease. Fougera and Co.—Electrargol for Injection, 10 Cc. Ampules.

Hynson, Westcott and Co.—Urease-Dunning.

H. K. Mulford Co.—Hypodermic Tablets of Emetine Hydrochloride.

Waukesha Health Products Co.—Hepco Flour; Hepco Dodgers; Hepco Grits.

E. Fougera and Co.—Electrargol. At the request of the manufacturer, Coman and Co., Paris, the Council has recognized E. Fougera and Co., New York, as the American selling agents for the product. Also in view of information received from Comar and Co. it has modified the New and Nonofficial Remedies description for Electrargol to indicate that this product now contains the equivalent of .4 per cent of metallic silver.

W. A. PUCKNER, Secretary, Council on Pharmacy and Chemistry,

Propaganda for Reform.

Administration of Fruit Acids.-The administration of the salts of the ordinary fruit acids is useful whenever it is desired to increase the alkalinity of the blood and diminish the acidity of the urine. Important investigations indicate, however, that it is scarcely feasible to produce any very marked effect on the alkalinity of the blood in this manner. If the physician believes that the alkalinity of the blood is an important factor in the recovery from gout and rheumatism, the administration of the salts of fruit acids is appropriate. Citrates should be preferred to tartrates, for the latter are imperfectly converted to carbonates and, when given in large quantities, may cause irritation of the kidneys. (Jour. A. M. A., Aug. 1, 1914, p. 420.)

Veracolate, Marcy and Co.-Veracolate is a proprietary said to consist of the salts of the bile acids, sodium glycocholate and sodium taurocholate, with cascara and phenolphthalein. While bile salts are said to increase the secretion of bile, it is doubtful whether this increase in the secretion of bile is of value in the treatment of gall-bladder affections. There is no occasion for the use of bile salts combined with fixed quantities of cathartics, which should be added only when they are needed. The advertising claims for Veracolate show a tendency to extravagant istatements. (Jour. A. M. A., Aug. 1, 1914, b. 420.)

Hectine.—Hectine, referred in to news-papers as a treatment for hay-fever, is a French proprietary, stated to have a combosition similar to that of atoxyl. If its composition is in accordance with the claims its action probably is no better than hat of atoxyl. Arsenic is used in the reatment of hay-fever with success in some cases. (Jour. A. M. A., Aug. 8,

1914, p. 502.)

Toxicity of Camphor.—A case is reported in which an 18 month old child was given, after a meal, a teaspoonful of camphorated oil (linimentum camphorae) by mistake. While this dose must have contained about 15 grains of camphor, no untoward symptoms were observed. (Jour. A. M. A., Aug. 15, 1914, p. 579.)

Assimilation of Calcium Phosphate.— Extensive experiments have demonstrated the availability of calcium phosphate for the bone formation of growing infants. This is a further proof of the power of the human organism to utilize inorganic substances. (Jour. A. M. A., Aug. 15, 1914, p. 581.)

Poisoning by Borie Acid Dressing.— While wet boric acid dressings are harmless, this is not true of dry, powdered or crystallized, boric acid. Alarming symptoms resulted from the application of dry boric acid to wounds caused by a burn. (Jour. A. M. A., Aug. 15, 1914, p. 593.)

PoDoLax.—A report from the A. M. A. Chemical Laboratory shows that PoDoLax, claimed to be "Podophyllin with the Griptaken out," is a phenolphthalein nostrum. PoDoLax is being extensively advertised by the E. E. Sutherland Medicine Company of Paducah, Ky. From the analysis made, it appears that PoDoLax is an aromatized syrup, containing phenolphthalein in suspension and fortified by the addition of an extract of senna. Its laxative action is due chiefly to the phenolphthalein of which each dose contains about 1.8 gran. Podophyllin was not found to be present. (Jour. A. M. A., Aug. 15, 1914, p. 595.)

Shortage of Drugs.—In view of possible drug shortage, physicians should bear in mind that many proprietary foreign preparations are made and sold in the United States under their descriptive names, thus dionin as ethyl morphin hydrochlorid, uro-

tropin as hexamethylenamin and Diuretin as theobromin sodium salycylate. (Jour. A. M. A., Aug. 22, 1914, p. 692.)

Placenta Praevia.

The treatment of placenta praevia is the subject or an article by E. P. Davis, Philadelphia (Journal A. M. A., July 25, 1914), who says that it is an accident that causes hemorrhage and infection, and demands hospital facilities and experienced operators. Logically, he says, it is a variety of ectopic gestation, and as regards infection it is usually more dangerous than the condition ordinarily so called. Any vaginal hemorrhage in a pregnant woman is a warning of danger, too frequently neglected because it is often painless and the dangers of infection must be kept in view. Manipulation and vaginal examination and the use of the tampon should be avoided as far as possible. One classification of these cases is those where the os is not entirely covered with placenta and those where it is. In the hands of the general practitioner and in private houses the best treatment in the first class of cases is to rupture the membranes as extensively as possible when dilatation permits, and to give the patient tonic doses of strychnin and allow her to deliver herself. or at least to try to, before artificial delivery is attempted. In complete placenta praevia in the hands of a general practitioner in a private house, the Praton-Hicks method of bringing down the leg and breach of the child would give the mother the best chance. Anesthesia may be required. The placenta must be perforated by one or two fingers, combined version performed and the leg siezed and drawn through the placenta. Under no circumstances should forcible or complete extraction be attempted, but a noose or bandage may be slipped around the child's ankle and a moderate weight attached if constant tension is desirable. The mother may then be stimulated as required, ergot and pituitary extract being avoided. Constant observation is demanded until labor finally develops and the fetus, if possible, is expelled spontaneously. Post-partum bleeding must be watched for and, following the delivery of the placenta, the uterus irrigated with hot 1 per cent. dilution of liquor cresolis of salt solution and the uterus, vagina and cervix firmly packed with 10 per cent iodoform gauze. In hospital practice, with the mother in good condition and the membranes available for rupture, a dilating bag may be introduced and gradully distended, thus securing dilatation of the cervix and pressure on the placenta. With membranes unavailable and cervix resisting, prompt abdominal section will give best results for mother and child. Davis' experience with this comprises sixteen cases. "The method of operation consisted in opening the abdomen, turning out the uterus, incising it and immediately removing its contents. It was interesting to observe how completely hemorrhage ceased when the uterus was emptied. The uterine cavity was then thoroughly irrigated with hot sterile salt solution and packed firmly with 10 per cent iodoform gauze carried through the cervix into the vagina. The uterus and abdomen were closed in the usual manner. The vagina was sponged out with mercuric chlorid solution and firmly tamponed with sterile or mercuric chlorid gauze. During the operation the patient received intravenous saline transfusion, and strychnin, digitalin and atropin were given hypodermatically." All the mothers recovered and six of the children.

Abuse of Normal Salt Solution.

L. Litchfield, Pittsburgh (Journal A. M. A., July 25, 1914), protests against the too free use of normal salt solution, and gives ease-reports supporting his contention. He holds that the administration of any artificial serum as a routine postoperative practice is questionable therapeutics. Too much water may fatally embarrass the heart as well as too much salt may the kidneys. When fluids cannot be taken by the mouth, thirst can be relieved by tap water or by isotonic dextrose solution given by enteroclysis. The dextrose solution is preferable in cases of threatening acidosis or inanition. When an addition to the blood stream is positively indicated, this is best accomplished by dextrose solution; "isotonic (5.1 per cent.) by enteroelysis; isotonic, hypertonic (up to 30 per cent.), or hyptonic (2 per cent.), by intravenous infusion." There are no contra-indications for the use of dextrose, but often serious ones for the use of saline solution. In urgent cases the intravenous method is best, and greater care should be used to see that all water intravenously introduced is not only sterile, but also non-toxic. "In medical practice artificial serums should be more frequently employed: (1) isotonic or hyptonic (a) after severe hemorrhage, exhaustive vomiting or diarrhea; or (b) in cases of extreme inanition; (2) hypertonic (c) in toxemic cases, including celampsia and uremia; (d) in cases of oliguria with threatened uremia; (e) to combat acidosis, or (f) in toxic states, as after anesthetics, gas, morphin poisoning, etc." Litchfield condemns Dr. Fischer's theory of nephritis as a gratuitous hypothesis, and says his recommendations for treatment are not justified by physiologic facts or clinical experience.

Mixed Vaccine and Phylacogens.—The unscientific character of mixed vaccines

the mixed filtered products of a number of vaccines marketed as "Phylacogens" has been especially emphasized and the danger from their indiscriminate use been pointed out. Recently John F. Anderson held that the claim that the combination of dead bodies or the filtered products of a number of different bacteria are useful for the treatment of certain diseases with specific cause, closely approaches quackery. Victor C. Vaughan also has pointed out the danger of the indiscriminate use of bacterial products and observed that untoward results are rarely reported. Physicians who are tempted by the optimistic statements of manufacturers to give complex bacterial products a trial, should remember that the warnings of disinterested scientists are of far more value than uncritical clinical reports put out under commercial auspices. (Jour. A. M. A., Aug. 29, 1914, p. 785.)

Book Reviews

The Clinics of John B. Murphy, M. D.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Valume III. Number III. Octavo of 215 pages, 54 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Published Bi-Monthly. Price per year: Paper, \$8.00; Cloth. \$12.00.

Doctor Murphy gives a most practical lecture in the June number of the Clinics. Skill in diagnosis and prognosis is shown to be necessary for professional success. In addition to this excellent lecture there is the usual number of good things in the way of surgical cases and practical points in diagnosis. Doctor Murphy's wonderful skill as a surgeon and as a teacher shows on every page.

A Treatise on Clinical Medicine.

A Treatise on Clinical Medicine. By William Hanna Thomson, M. D., LL. D., formerly Professor of Practice of Medicine and of Diseases of the Nervous System in the New York University Medical College; Ex-President of the New York Academy of Medicine, etc. Octavo volume of 667 pages. Philadelphia and London, W. B. Saunders Company, 1914. Cloth, \$5.00. Half Morocco, \$6.50.

That Thomson's Clinical Medicine will become a favorite among the medical men is our prediction. The book is unique in its conception and is indeed a Clinical Medicine. Doctor Thomson has a most pleasing style and is able to bring out his points in a charming way. There is a most commendable absence of polemic discussion, the author going by the most direct route to the center of the subject under consideration, basing his views on his clinical experience after years of study with abundance of clinical material at his command. We advise our readers to place Thomson's Clinical Medicine on their lists for early purchase.

We have received from Messrs. Parke, Davis and Company's research laboratory a copy of their collected papers detailing the results of the research work carried on in their laboratory. The book contains many articles of interest and value which cover a wide range of subjects.

We acknowledge receipt of Volume II of the Medical and Surgical Reports of the Episcopal Hospital of Philadelphia. This volume, like its predecessor, contains many articles of unusual interest and is well illustrated. We commend the publication of such reports for they do much to

help in the advancement of medical science.

The Practice of Surgery.

The Practice of Surgery. By James G. Mumford, M. D., Lecturer on Surgery in Harvard University. Second Edition, Thoroughly Revised. Octavo volume of 1032 pages with 683 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$7.00. Half Morocco, \$8.50.

The second edition of Mumford's Surgery comes to us thoroughly revised. The excellent standard established by the first volume is in no wise departed from and the new edition will meet will all the favorable comments of the former volume, as it most justly deserves them.

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Address allcommunications to

New Mexico Medical Journal, P. O. Box 23, Las Cruces, N. M.

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		W.T. Joyner Roswell
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Post Graduate School of Medicine, Tulane University of Louisiana.

Twenty-eighthAnnual Session opens September 28, 1914, and closes June 1915

Physicians will find the Po'yclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, including laboratory and cadaveric work. For further information, address:

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The New Mexico Medical Journal

PUBLISHED MONTHLY BY COUNCIL OF THE NEW MEXICO MEDICAL SOCIETY

R. E. MCBRIDE, M. D., MANAGING EDITOR

Las Cruces, New Mexico

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Treasurer, F. E	. Tull	Albuquerque
∫ E. B.	Shaw, Chairman	. Las Vegas
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The New Mexico Medical Iournal

Volume XIII

OCTOBER, 1914

No. 1

$E \cdot D \cdot I \cdot T \cdot O \cdot R \cdot I \cdot A \cdot L$

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

You want a larger and better journal
YOU CAN MAVE IT BY WHITING OUR ADVERTISERS: "I
BAW YOUR AD. IN OUR STATE
JOURNAL."

FAVOR THOSE WHO FAVOR US

The Southern Medical Journal, September, 1914, in commenting on the return of Surgeon General Gorgas to Washington to assume his duties as Chief of the Medical Corps of the Army calls attention to his great achievements and the many honors that have been thrust upon him as a result. The editorial points out the great necessity of a Department of Health with an officer in the cabinet and suggests that no one could better fill this position than Surgeon General Gorgas.

We, like all others interested in the betterment of conditions among our people, agree that we have long since run by the time when we should have had a Department of Health and we cannot be too insistent unon its creation. We heartily endorse the plan of the Southern Medical Journal to make Gorgas its head.

The meeting at Albuquerque was not nearly so well attended as was expected. The very many diversions in the way of the State Fair and various fraternal organization meetings to say nothing of the Better Baby Contest, claimed many of the members, particularly from Albuquerque, who would otherwise have attended. It is safe to say that in future the annual meeting will not be held at a time when there are so many other things calling for attention. What the meeting lacked in numbers, however, it made up in enthusiasm and in the quality of the papers. Never before in the history of the society have there been so many papers of such a high grade.

The entertainment was of a particularly pleasing character and the banquet was thoroughly enjoyed by all.

The following was the registration as we have it:

Chas. A. Frank, Albuquerque.

James H. Wroth, Albuquerque. W. L. Brown, El Paso, Texas.

M. K. Wylder, Albuquerque.

S. G. VonAlmen, Clovis.

R. E. McBride, Las Cruces.

H. B. Kauffmann, Albuquerque. Chas. E. Lukens, Albuquerque.

L. S. Peters, Albuquerque.

J. W. Laws, Lincoln.

B. Ruppe, Albuquerque.

F. H. Gobbel, Albuquerque.

J. A. Reidy, Albuquerque.

S. D. Swope, Deming.

S. L. Burton, Albuquerque.

P. G. Cornish, Albuquerque.

M. G. Cartwright, Albuquerque. Elliott C. Prentiss, El Paso, Texas. C. E. Yount, Prescott, Arizona. G. S. McLandress, Albuquerque. R. L. Hust, Albuquerque. W. R. Lockett, Albuquerque. Jos. S. Cipes, Albuquerque. C. M. Mayes, Roswell. E. Osuna, Albuquerque. C. A. Forman, Albuquerque. W. W. Spargo, Albuquerque. Frank E. Tull, Albuquerque. D. H. Carns, Albuquerque. J. P. Kaster, Topeka, Kansas. W. G. Hope, Albuquerque. Evelyn F. Frisbee, Albuquerque. Wm. Howe, Albuquerque. C. LeRoy Brock, Jemez. James J. Pattee, Pueblo, Colorado. C. S. Losey, East Las Vegas. R. K. McClanahan, East Las Vegas. A. H. DeLong, Gallup. E. H. Bruns, Fort Bayard. Wm. D. Radcliff, Belen. T. Espinosa, Albuquerque. F. W. Noble, Tucumcari. James Vance, El Paso, Texas. A. M. Wigglesworth, Fort Defiance,

W. T. Joyner, Roswell.

Arizona.

Willis W. Waite, El Paso, Texas. John F. McConnell, Colorado Springs, Colorado.

H. R. McGraw, Denver, Colorado. W. T. Murphy, Albuquerque.

F. J. Patchin, Albuquerque.

F. E. Mera, Santa Fe.

Janet Reid, Deming.

J. M. Diaz, Santa Fe.

David Knapp, Santa Fe.

Frank Brady, Dawson.

Dr. Peck, U. S. A.

D. C. Twichell, Albuquerque.

W. F. Wittwer, Los Lunas.

THE ADJUSTMENT OF THE DIETARY TO ECONOMIC CONDITIONS.

The migration of a large fraction of the population of the civilized parts of the world from the country to the cities is one of the phenomena attending the "industrialization" of modern Whereas formerly the city was essentially a center for trade and office life, of late the factory, with its large working population has become an adjunct of city life. From the point of view of nutrition, which plays a prominent part in determining the fitness of the individual for work, it is unfortunate that the less opulent classes should be drawn away from the region of cheap food in the country to homes where new standards of living are imposed on them. The altered distribution of the population has brought with it certain problems of nutrition that cannot be dismissed as inconsequential or solved by restrictive legislation. Economic laws sometimes are far more effective than educational propagandas or governmental interference.

The industrial worker who migrates from the country to the city, like the immigrant, soon finds that he must alter his accustomed diet. The simplicity of an adequate diet obtainable in the country regions cannot readily be continued in the city. The cheapest articles of food, such as bread and potatoes, available in the larger centers, do not satisfy the requirements. But even if cheap forms of protein were procurable, the demand for a special source, namely, meat, soon becomes a dominating factor in the selection of the ration. Meats, whether

of mammals, birds or fishes, have always entered prominently into the dietary of the well-to-do: and in this country, where the tendency to wipe out the distinctions between social classes is always in operation, the poor and the less favored groups are continually striving to imitate the ways of their more fortunate neighbors. A national sentiment fosters this ambition in a country where "every man is a king." The urban workman wants good cuts of meat not because they are absolutely indispensable to health, but because the example of his neighbor has encouraged the habit. It is quite different on our farms and in rural communities, where local produce enters more largely into the home.

With an impending rise in price and increasing scarcity of meat making itself felt throughout the country, and with the growing tendency of the industrial workers coming from the country to the cities to try to provide the table which is demanded by their well-to-do neighbors, a household problem inevitably arises. Either the dietary habit must be materially changed to include a different type of ration a scheme almost impossible of accomclishment where food customs are in part dictated by usage—or retrenchment in expenditures must be sought in some other way.

At present the cheapest articles of food include potatoes, peas and beans, and certain cereals in the form of coarse bread; cabbage forms a cheap green vegetable; among animal products, milk and cheese are comparatively inexpensive; fish furnish the cheapest forms of flesh foods; and dried apples are among the cheapest fruits. Ex-

pensive butter can be in part replaced advantageously by less expensive, yet thoroughly wholesome animal and vegetable fats. Beef, which is always expensive, might well be replaced more liberally by fish than it has been in the past. Potatoes are not yet competing with the cereals as extensively as they might well do; but cheese is likely to find increasing favor.

The adequate dietary is a deciddly flexible affair. The idea that even radical departures from acquired food habits are likely to lead to nutritive disorder needs to be eradicated, says The Journal of the American Medical Association. The foods of nations vary widely and yet support creditable human specimens. When once this fact is thoroughly appreciated there will be less dismay when a rise in the price of some supposedly indisensable product is announced. The adjustment of the dietary to the pocketbook will be further facilitated when intelligent marketing becomes recognized as a household art that deserves cultivation.

Tell your neurasthenic patient to go plant a garden. In the hurly-burly of practice the temptation is strong to hand your patient a prescription and dismiss him with the implication that nothing is the matter with him anyway. It would seem to be unnecessary to dwell on the importance of taking a little painstaking care in the management of such a case, were it not notorious that the average neurasthenic is usually dismissed without that attention which only a dominating, conscientious personality in the shape of a physician can give. The average

neurasthenic needs just such advice as is presented at the beginning of this comment. If his control of agricultural space is limited to a twenty-foot back yard, let him divert his mind by slow, methodical and not too fatiguing labor close to nature. The esthetic enjoyment itself of planting pretty flowers will rob the work of half its unpleasantness, while the keen satisfaction of watching the plants grow and mature will contribute more to the restoration of health than almost any one or more of the "remedies" in the materia medica. To be sure, the requisite is that the advice be given in the proper way by a physician who knows whereof he speaks. The advice from any other would be futile.—(Cincinnati Medical News, September, 1914.)

SCHOOL HYGIENE.

The study of conditions surrounding school life which may injuriously affect the growth and development of the child, and proper appreciation of the influence of physical defects on the intellectual capacity of the young, have until quite recently received little consideration in this country to The first attempt to exercise medical supervision of schools in the United States was by the city of Boston, wind 18940 yfor the purpose of controlling the contagious diseases of childhoodan From this beginning? the movement has developed until now most of our cities maintain a more of less comprehensive supervision over school hygiene and the medical inspections rots schoolchildren is mandatory in a number of states and elective in some others.

In this respect we are considerably behind European scountries, notably

Germany and England, where the system of medical school supervision is more extensively developed, has been longer in operation and is practically national in character. That this is so is largely due to the fact that consideration of dirt, destitution and disease, has not been of such immediate importance with us, except in certain restricted areas.

School hygiene is a complex problem. Our knowledge of its principles is greatly in excess of their practical application. The position of school medical officer presupposes, in addition to thorough training in physiology and psychology, a practical working knowledge of the physics of heat, light and ventilation, and an ability to recognize and coordinate the physical condition and educational needs of the developing child.

The need of skilled services and the expense incident thereto have been instrumental in restricting the practice of school hygiene largely to urban communities. This is unfortunate, because the great bulk of the school population of this country is as yet scattered over the rural districts will be abulant of

The disproportionate prevalence of preventable diseases among urban and tural populations is not great; the necessity, therefore, of educating rural communities to the exercise of sanitary precautions necessary for the preservation of health is apparent. The importance of school hygiene in this respect is paramount, because the sanitary redemption of the majority of rural communities must largely be brought about through the practical education of the young in orderliness, cleanliness and the observance of sani-

tary precautions. Furthermore, the medical inspection of schoolchildren is in more or less intimate relation with the homes, which in turn are component parts of communities. The educational effect of school hygiene extends through these channels for the betterment of the community health:

There is necessity for uniformiay in methods of examination and of classifying the results for collective statistics to be of value. There is need of uniform methods and systematic classification of results before these observations can be of value in studying mental and physical standards, and the effect of changing social conditions on development.

The object of school hygiene, says The Journal of the American Medical Association, is to place the impressionable child in the most favorable environment for physical and mental development and to detect and correct defects which may impede intellectual training. The medical supervision of schools may, however, be further utilized by the state in the determination of the prevalence of communicable diseases, especially in rural communities. The ultimate control of malaria, trachoma, tuberculosis and typhoid fever in these communities must be largely through educational methods. these reasons the combination of the duties of the health officer with that of the medical supervision of schools appears eminently practicable.

Intensive studies of the mental capacity of American schoolchildren, at varying ages, should be undertaken, in widely separated communities, with a view to the establishment of the normal mental standard, thereby render-

ing possible the study of the impress of immigration, and the effect of a changed social environment on the mental processes of the immigrant child, as revealed by similar examinations at the ports of entry.

NEWS NOTES.

The Bremerman Sanatorium (Inc.) has been organized for the purpose of erecting at Potash Sulphur Springs, Lawrence, Arkansas, the only institution in America devoted exclusively to Urological Surgery.

This building will be of fire-proof construction and modern in every detail; the plans being made by most prominent hospital architects. There will be a capacity of one hundred beds; every modern diagnostic method will be employed and the plans are for the erection of the finest institution of its kind in the world.

The Consulting Staff includes: Dr. John B. Murphy, Chicago; Dr. M. Milton Portis, Chicago; Dr. H. W. Soper, St. Louis; Dr. Albert McCay, Portland; Dr. Lewis C. Bosher, Richmond; Dr. Oliver Lyons, Denver; Dr. Frederick W. Robbins, Detroit; Dr. G. Shearman Peterkin, Seattle; Dr. Walter Barnes, Chicago; Dr. Bransford Lewis, St. Louis, Dr. E. G. Mark, Kansas City; Dr. Louis Frank, Louisville; Dr. Paul Pilcher, Brooklyn; Dr. James A. Gardner, Buffalo; Dr. Winfield Ayres, New York City; Dr. Granville MacGowan, Los Angeles.

Dr. Lewis Wine Bremerman of Chicago will be Surgeon-in-Chief.

Construction will begin in the near future and pushed to completion as rapidly as possible.

Thirty-Third Annual Meeting.

HOUSE OF DELEGATES.

Minutes of the House of Delegates 33rd Annual Meeting New Mexico Medical Association, 1914, held at the Commercial Club, Albuquerque, New Mexico, Oct. 5, 1914, 9:30 a. m.

Meeting called to order by Dr. H. B. Kauffman, President.

Dr. R. E. McBride, of Las Cruces, New Mexico, secretary, was in attendance at the desk, and reported a quorum present.

Moved, seconded and carried that the reading of the minutes of the last session be dispensed with.

The Secretary read his report and upon motion of Dr. J. H. Wroth same was received and unanimously adopted.

Moved by Dr. Wroth, and duly seconded, that the delegates to the American Medical Association be and hereby are instructed to insist upon the mileage and per diem, to and from, of all delegates. Prevailed.

It was duly moved and seconded by Dr. Wroth and Dr. Peters, respectively, that the amendment suggested in report of the Secretary be recommended and that the delegates to the American Memical Association be instructed regarding it. Prevailed.

Dr. C. M. Mayes, having voted in the affirmative on the last above motion, now moves to reconsider the motion of Dr. Wroth, which, after discussion, was seconded by Dr. Wroth and duly carried.

And now Dr. Mayes moves that a committee of three be named by the

chair to consider the report of the Secretary and to report to this body at a future date; seconded and carried.

The chair names the following as the committee: Dr. C. M. Mayes, Dr. J. H. Wroth and Dr. S. G. Von Almen.

After tendering a vote of thanks to the Secretary for his work in behalf of the Medical Jruonla the session adjourned until tomorrow morning at 9:30 a. m.

R. E. McBride, Secretary.

Minutes of Meeting of House of Delegates of the New Mexico Medical Society, held at Albuquerque, N. M., Oct. 6, 1914, 9:30 a. m.

Called to order by Dr. Kauffman, President.

Secretary McBride present.,

Quorum present.

Dr. W. E. Kaiser was duly appointed councilman, pro tem, in place of Dr. Shaw.

The following committee was appointed:

Necrology and General Resolutions: Dr. Frank, Dr. Bradley, Dr. McClanahan.

Whereupon the House adjourned until 5 o'clock this p. m.

R. E. McBride, Secretary.

HOUSE OF DELEGATES.

Minutes of Meeting of House of Delegates of New Mexico Medical Society held in Albuquerque, N. M., at the Commercial Club, Oct. 7, 1914, at 8:30 A. M. (33rd).

Meeting called to order by Dr. Kauffmann, President.

Secretary present:

Minutes of last two previous meetings read and approved.

The following officers were unanimously chosen:

Dr. W. T. Joyner, Las Vegas, N. M., President.

Dr. Evelyn F. Frisbie, Albuquerque, 1st Vice President.

Dr. C. F. Losey, East Las Vegas, 2nd Vice President.

Dr. C. A. Frank, Albuquerque, 3rd Vice President.

Dr. R. E. McBride, Las Cruces, Secretary.

Dr. F. E. Tull, Albuquerque, Treasurer.

Dr. W. E. Kaser, Las Vegas, Councilman for three year term.

Report of special committee appointed to consider report of Secretary heretofore read before this body is as follows:

Your special committee appointed to consider the Secretary's report beg leave to report as follows:

T

They suggest the following resolution and suggest its adoption:

Be It Moved by the House of Delegates that pending an annual meeting of the House of Delegates of the New Mexico Medical Society any reputable physician may make application to the Councillor of his district and if his credentials are found correct and according to requirements he may, on written report of the Councillor, be admitted to membership in the New Mexico Medical Society subject to final action of the House of Delegates in regular annual session.

H:

They submit the following resolution and suggest its adoption:

Be It Moved by the House of Delegates of the New Mexico Medical Society that the Council be and are hereby given authority to employ a suitable man in their judgment, to approach all unaffiliated reputable physicians in the State and endeavor to induce them to join the Society, the expense of such employment to be paid out of the funds of the society on warrant signed by the president of the council and the president of the society, attested by the secretary.

In regard to the judicial council amendment (A. M. A.) the committee recommends that:

Resolved that the New Mexico State Society direct its delegates to the American Medical Association to vote against the proposed amendment to Sec. 4, Chapter VII on the ground that it takes away all authority from our State Society, and to insist that the right of appeal from either State or county society, or members, shall lie to the Judicial Council of the American Medical Association only through the State Society.

(Signed) C. M. Mayes, Chairman.

J. H. Wroth.

Moved by Dr. Frank, and duly seconded that the above report be received and adopted, carried.

Moved by Dr. Wroth that the last resolution be printed at the expense of the Society (relative to Sec. 4, Chapter 7) and sent to every State Society and to every member of the House of Delegates of the American Medical Association; duly seconded and prevailed.

Dr. McBride, the secretary, reported that with the consent of the Council he has wired credentials to Dr. S. L. Burton of Albuquerque as a delegate to the American Medical Association, the regular delegate and alternate being unable to attend.

Moved by Dr. Wroth that the secretary be directed, under the proper authority, to pay all necessary bills for this meeting; seconded and prevailed.

Dr. Howe, on behalf of the Las Vegas delegation, invited the members of the Society to select Las Vegas for their next annual meeting, and there being no apparent objection Las Vegas was selected as the meeting place for the year 1915. However, Dr. Mc-Bride on behalf of the Dona Ana County delegation announced that he would insist on the Society selecting Las Cruces as its meeting place in 1916, and produced credentials so to do.

The following resolutions were presented by committee heretofore appointed and unanimously adopted: (For resolutions see following pages).

The following resolution was also unanimously adopted:

Whereas, the New Mexico Medical Society is indebted to the Bernalillo County Medical Society, the City of Alburquerque and its hospitable population, the Commercial Club of Alburquerque, the Woman's Club of Alburquerque, and the Alburquerque Sanatorium for a most successful meeting; therefore,

Be It Resolved that the House of Delegates of the New Mexico Medical Society in regular session in the City of Albuquerque. October 7th. 1914, do bereby extend their sincere thanks to the above named organizations and bodies for the many courtesies received, and

Be It Further Resolved that the Secretary be and is brevely instructed to forward a copy of these resolutions to the several bodies above named and to spread same in the minutes of the New Mexico Medical Society.

A vote of thanks was extended to Dr. Kauffman, the retiring president.

Whereupon the meeting adjourned sine die.

R. E. McBride, Secretary.

REPORT OF THE SECRETARY.

Mr. President and Gentlemen of the
House of Delegates of the New
Mexico Medical Society:—

Your secretary begs to submit the following report:

The membership of the New Mexico Medical Society as shown by the secretary's books is as follows:

During the year only one county has suspended its membership for non-payment of dues. This county is Eddy and the secretary of the county society writes me that efforts are being made to reorganize.

During the year Doctor J. F. Lilly of the Bernalillo County Society, Doctor J. O. Walkup of the Grant County Society and Doctor G. L. Wycoff, have passed to the Great Beyond.

(Continued on Page 12.)

Whereas, it has pleased Almighty God in His infinite wisdom to remove from the sphere of his earthly labors our associate,

DR. J. F. LILLY,

and

Whereas, in the loss of Doctor Lilly, we realize that the State has lost a good citizen, the society a splendid member and the family a loving and devoted husband and father; therefore,

Be it Resolved that the Society offers its sincere sympathy to the bereaved family and relatives; and

Be It Further Resolved that a copy of these resolutions be sent to the family, and that they be recorded on a page of the minute book set aside for that purpose. Whereas, it has pleased Almighty God in His infinite wisdom to remove from the sphere of his earthly labors our associate,

DR. G. L. WYCOFF,

and

Whereas, in the loss of Doctor Wycoff, we realize that the State has lost a good citizen, the society a splendid member and the family a loving and devoted husband and father; therefore,

Be it Resolved that the Society offers its sincere sympathy to the bereaved family and relatives; and

Be It Further Resolved that a copy of these resolutions be sent to the family, and that they be recorded on a page of the minute book set aside for that purpose. Whereas, it has pleased Almighty God in His infinite wisdom to remove from the sphere of his earthly labors our associate,

DR. J. O. WALKUP,

and

Whereas, in the loss of Doctor Walkup, we realize that the State has lost a good citizen, the society a splendid member and the family a loving and devoted husband and father; therefore,

Be it Resolved that the Society offers its sincere sympathy to the bereaved family and relatives; and

Be It Further Resolved that a copy of these resolutions be sent to the family, and that they be recorded on a page of the minute book set aside for that purpose.

REPORT OF THE SECRETARY.

(Continued from Page 8.)

Your secretary suggests that you devise ways and means whereby a larger number of physicians in counties where no county society exists may become affiliated with the organized profession.

During the year President Kauffmann has made the following appointments:

Delegates to the Conservation Congress: L. S. Peters, R. E. McBride, D. H. Carnes, W. T. Joyner, H. M. Smith. Alternates: S. A. Milliken, M. M. Crocker, S. G. Small, F. F. Doepp, J. J. Shuler.

Chairman of the Section on Practice: Dr. C. M. Mayes.

Chairman of the Section on Surgery: Dr. D. H. Carnes.

Committee on Public Health and Legislation: J. W. Colbert, J. R. Gilbert, W. E. Handy, E. B. Shaw, G. E. Bushnell, T. C. Sexton, W. H. Lloyd, J. F. Scott, Jr., F. W. Noble, P. M. Steed, C. F. Beeson, L. L. Cahill, F. F. Doepp.

Delegate to meeting of American Medical Colleges and delegate to meeting of Committee on Public Health and Legislation of the A. M. A.: Dr. R. E. McBride.

Fraternal Delegate to the Texas State Society: Dr. W. T. Joyner.

Fraternal Delegate to the Colorado State Society: Dr. L. S. Peters.

Fraternal Delegate to the Arizona State Society: Dr. S. D. Swope.

I am pleased to report that fraternal delegates have been named by the State Societies of the States of Arizona, Colorado and Texas to attend this meeting. These delegates are Doctor C. E.

Yount of Prescott from the Arizona State Society; Doctor H. R. McGraw of Denver from the Colorado State Society and Doctor J. C. Anderson of Plainview from the Texas State Society.

During the year there has been collected by the secretary from all sources the sum of seven hundred and fifty-two dollars and during the same time he has expended four hundred and twenty dollars and forty-three cents. An itemized statement of receipts and disbursements is attached hereto and made a part of this report.

There are appended hereto communications from the secretary of the American Medical Association, the secretary of the Utah State Medical Society and the secretary of the New York State Medical Society and your secretary asks action on these at the proper time.

In conclusion your secretary desires to thank the officers and members of the society for their consideration and courtesy during the past year.

Respectfully submitted,

R. E. McBride, Secretary.

PROCEEDINGS

Of the Thirty-Third Annual Meeting of the New Mexico Medical Society, held in the Commercial Club Building, Albuquerque, New Mexico, Oct. 5, 6, 7, 1914. (General Session.)

And now on this 5th day of October, 1914, at 10:30 a.m., the General Meeting of the Thirty Third Annual Meeting of the New Mexico Medical Society was duly called to order by H. B. Kanffmann, President, in the Commercial Club Building, Albuquerque, New Mexico, whereupon the following proceedings were had, to-wit:

Invocation by Rev. C. F. Foreman, of Albuquerque:

Almighty God, we acknowledge Thee this morning as the master of our spirits and the framer of our bodies, of the Great Creator of all that is, and as the one who has manifested such marvelous wisdom and design and love in all of Thy creation. We come, Our Father, to pray for Thy blessing upon this Medical Association which at this moment convenes; we thank Thee for the noble profession which is represented here and for all that it has done for the world; we thank Thee for the evidence of Thy manifest blessings upon this profession, the progress which has been made—the marvelous progress in the past decades, and we pray, Our Father, that Thy blessing may continue to rest upon the physicians and the surgeons of our country and the world that Thy greatest light and knowledge may be given to them. We thank Thee, Our Father, for the alleviation of suffering which has come through the practice of these, Thy servants, and as they shall continue to go forth with the trying tasks, the purposes, the questions and problems and the subjects which interest them-grant that they may have Thy greatest blessing; and we pray Thee now that Thou wouldst receive us, that Thou wouldst accept us in the name of Him Whom Thou hast given us for our Salvation, Jesus Christ. Amen.

Address of Welcome by Dr. R. L. Hust, of Albuquerque:

sorry that Mayor Boatright is not able to be present this morning, but in his behalf and the City I bid you all a most hearty welcome and the Mayor has asked me to say to you that while in the City you should have absolute control of the key to the City and to do as you please and that after three days of mature deliberations and scientific discussions that you turn yourselves loose and have a bully good time; and if any of you get arrested to call Dr. Kauffman, the Chairman of the Society. I want to extend Mr. Boatright's regrets for not being able to be here. I thank you.

Address of Welcome on behalf of the Bernalillo County Medical Society by Dr. J. A. Reidy of Albuquerque: Mr. Chairman and Members of the Society:

When I have listened to the hospitable words of our Mayor, welcoming you to our city and greeting you in the name of the citizens to enjoy all the privileges of the City, in the same spirit of hospitality I, as one of the members of the Bernalillo County Medical Society and also as a citizen of Albuquerque, extend to you a most cordial greeting. Our people are always glad to welcome our brothers from the other Societies throughout the state because of our personal esteem for them and because our meetings in the past have been productive of much good, as we know, not only from the sociability among the members but also because of the liberality of the press in printing much of our work from day to day, which is pleasing to us and which also is instrumental in building up the health of the state. While the

Mr. Chairman, Ladies and Gentlemen, and Members of the New Mexico State Medical Society:

I will state to you that I am very

pains of strife are rampant in the European country at the present time, the annual session of this Society, at the present time, opening so auspiciously, I hope will be as harmonious in every respect as those in the past. matters not from what blood we spring, whether it be German, Slavish, Gallic or English, we are missionaries in the field of medicine, striving not for the greater destruction of human life, but for more scientific means of relieving human suffering. To heal the wounds of a political nation is a greater glory to my mind than that which has been successful in the bloody field of Carthage,-watching the struggle between life and death-I am twisted—We are glad to welcome you all here and hope that when you depart from here that the spirit of hospitality of the Bernalillo Medical Society—that you will long to hasten vour return.

Response to Addresses of Welcome by Dr. S. D. Swope, of Deming.

Gentlemen of the New Mexico Medical Society and Citizens of Albuquerque:

It gives me great pleasure to respond to these words of welcome from the City of Albuquerque and the Bernalillo County Medical Society. I have been coming to Albuquerque now a good many more years than Wroth and I want to admit. During all of that time these words of welcome have been pouring out to those who came for these short periods of recreation and improvement until, if I were able to pour out the real feeling of the heart, the sun would be going down before I stopped talking to you. It is, indeed, a pleasure to respond to words

of welcome, that we feel are not fron. the lips alone, but are coming from the heart. We know that we have carried the keys of this metropolis of the great new state for so many years that most of us when we get home, at all, are possessed of so many keys that we are very often like the man who couldn't find the key hole for the key when he comes in at 11 or 12 o'clock at night, our pockets are full of keys. It becomes especially satisfactory to a man like myself, coming from the sand dunes and dry plains of southern New Mexico, and it is much different from this place where things flow so freely as they do in this great City of Albuquerque—the only difficulty that we really have is in getting too much when we come here. We enjoy our visits to Albuquerque—we are at home at Albuquerque, at the metropolis of the great new southwestern State of New Mexico—we are proud of her rapid advances from year to year; we see the wonderful improvements it has made more and more on our annual returns. The first meeting I attended in Albuquerque there was Wroth and myself and three or four other individuals who gathered in a building made of cobble stones picked up on the street; year after year improvements have taken place until now we are assembled in this great building finished in the most modern style, with new fine buildings surrounding us on every side and materials for building more piled up on your vacant lots; and we come again and again not feeling the touch of Father Time, though twenty years may have elapsed; and since we came first the feeling in our hearts of welcome is just as fresh, just as new,

and just as welcome as it was on our first visit. A few of my friends whom we met down in the jail or this building, whatever you want to call it, are still with us, have come from year to vear until the change is almost complete. It is a welcome change. Albuquerque and about Albuquerque the New Mexico Medical Society has grown with the greatest city within her borders, and we know that as the years speed by and these young men who are to take our places come upon the stage of action, that the welcome will be just as great and I assure you our ears will be just as proud as they are today to hear this welcome. I thank you.

County Society Motes

After the summer vacation the Chaves County Medical Society met in regular session for the beginning of the winter work on the night of September 3rd, with a full house present. It was decided, after completing the four year course of study as gotten out by the A. M. A., that we would divert the work back somewhat along the line of our former work. The society will meet twice each month, first and third Thursday nights. The first meeting will be for business matters, clinical cases, report of cases and discussions. The meeting on the third Thursday night will be for essays and discussions only. After our vacation we feel like getting into harness in earnest and doing some good work.

C. M. YATER, Secretary.

Original Articles

EUGENICS.

H. B. Kauffmann, M. D., Albuquerque, N. M.

(President's Address, 33rd Annual Meeting New Mexico Medical Society, Albuquerque, New Mexico, October 5th—7th, 1914.)

To the Members of the New Mexico Medical Society:

I must apologize since I have deviated from the usual rule of selecting a purely medical subject for an address, and have chosen eugenics as the role. I have been influenced in this selection since eugenics occupies a place very closely allied to, if not a part of medical science, and in the future our profession will be called upon to play a very important part in its practical application. The subject in its entirety is a difficult one to handle, at least in a single paper, for the different phases. objects, the subjects and conditions it seeks to examine and correct, are as variegated as "Joseph's coat." Commencing with race culture, we gradually advance by devious paths, finally finding ourselves engaged in seeking a betterment of all conditions, passing through sociologic and economic phases, and eventually finding ourselves in the realm of moral philosophy. The subject in hand will necessarily be tedious and dry, when recounting the different theories advanced, but I shall endeavor to detail them as briefly and concisely as clearness will permit. The main idea of eugenics from the derivation of the word appeals to every one, but the methods of attaining this end are so diverse and far-reaching, that it behooves us to move slowly and temper all of our acts in its consummation with care, tact and justice.

Eugenics has grown healthy and waxed strong as a science. The widespread discussions and literature on the subject, together with the variance of ideas upon it, and the many ramifying paths into which we have been led by the enthusiastic, and in many cases, misguided advocates of extreme and modern eugenics, makes this a subject of timely moment and one worthy of deep consideration. It has become healthy and strong as a science, in fact, it has become a fad. Fads of all kinds blossom and wax healthy and strong in our country and eugenics is not the least of these. The fact of it being a fad and waxing strong and vigorous would not concern us greatly, if confined to the channels originally intended, and its proper sphere, but, when in its arrogance and new-found strength, it strikes at the bulwark of the State, the home as represented by the mother and child, and would change the natural order of being and apply the methods of the brood-farm, it behooves all sane and right-thinking people to pause, think and ponder and to call a halt to extreme measures which will subvert and overturn all that is dear to liberty-loving people; the entire social fabric, and render everything chaotic.

There can be no doubt that all are in sympathy with true eugenics, and eugenics in the true sense, for all desire the betterment of the human race and the up-building of humanity, the only difference of opinion being, as to the means to attain the end. those who have due regard for the sacredness of the home, the extreme eugenistic theories come as a shock, and they will not be borne along on the popular tide of faddism, nor seek the golden pot at the end of the rainbow, now go ashore on the shoals of untried theory; but by conservative, rational and sane methods correctly applied through educational systems, achieve the desired end without wounding the natural sensibilities nor greatly curtailing personal liberties. As Horace truly says: "Untried thou shinest;" this applies forcibly to eugenics. Eugenics per se is not new nor is it undesirable in the true acceptation of the word and its derivation. Taking its origin from the Greek meaning wellborn, or more freely translated, meaning a wellformed, healthy and vigorous child, with no tendency to disease of a grave character, we have the eugenics known from the beginning of time and the desideratum of all people and nations to have strong, healthy and vigorous men. With men of this calibre the safety of the State and domestic tranquility were secured and vigorous defense was made against invaders.

Sparta applied eugenics in a stern and harsh manner and was an extremist in such matters, as witness her application of its principles. On the birth of a child, the elders of the Laconian tribes were called upon to examine the child as to its fitness to live. If upon examination the newborn appeared weakly or deformed, with no evidences that it would grow up to man's estate healthy and vigorous so as to assume its duties as a soldier, it was condemned and cast over a precipice and

destroyed. If found with the evidence of health and vigor, it was saved by their decree and passed into the custody and under the protection of the State; attending the State schools, eating the prescribed rough and plain fare at the public tables and later enrolled in the Spartan army. The value of this rough and early eugenics may be gathered from the fact that Sparta, which was not fortified and was without walls, had never had an enemy approach within three days march of the city, and this was their proudest boast. This was eugenics of the boldest type of those times and it attained the end desired—the robust man. But, can we apply such methods in this our day of bodily decay and degeneracy? Can we become murderers of countless thousands to attain this end? I do not believe so, nor is it necessary, but we can apply rational and sane methods in raising and maintaining the standard of the home and honoring and dignifying motherhood, and thus obtain a splendid result.

Modern eugenics differs from eugenics of the olden days owing to the fact that it has become a fad, and being a fad has many sponsors and godfathers who have so mutilated and changed the original that the founder of the modern movement would have difficulty in recognizing his own offspring. Although race culture has been considered ever since the creation, it remained for Sir Francis Galton to shape it into a formal science.

English born, he was related maternally to Darwin. He studied medicine, but by financial means possessed, was enabled to devote himself to travel and research, rather than to professional work. After Darwin published

his "Origin of Species," Galton was led to consider the application of its theories to the improvement of the human race. In 1865 he wrote: "The power of man over animal life, in producing whatever variations and forms we please is enormously great. It would seem as though the physical structure of the future generation was as plastic as clay under the control of the breeder's will. It is my desire to show more pointedly than, so far as I am aware, has been attempted before, that mental qualities are equally under control." This was the germ of his theory. He developed and embellished it in the following works: Hereditary Genius (1869), English Men of Science (1874), Inquiries into Human Faculties (1883), Life History Album (1884). Record of Family Faculties (1884), Natural Inheritance (1889). The first use of the word "Eugenics," which was coined by Galton, occurs in "Inquiries into Human Faculties."

Galton further founded a Research Fellowship, and established a Eugenic Laboratory; and from these has arisen a Eugenic Educational Society. Galton noticed the occurrence of distinguished scholars and mathematicians in families in which other similarly distinguished occurred, began inquiring into the family history of representative classes, such as philosophers, artists, financiers, and soldiers. each group he would compare the qualities which made the group flourish with the qualities which made it decay. His conclusion was that the chief among the causes of civic prosperity was a large capacity for labor,-mental, bodily or both-combined with eagerness for it.

To encourage this and other qualities

which he named, he proposed that a suitable authority should issue eugenic certificates. These should imply more than an average share of good constitution, of physique, and of mental capacity. The great objection to these proposals was that the race would become overbalanced, the excessively good and strong on top and the great majority excessively bad or weak at the bottom. To this Galton replied, with what he called "the law of regression toward mediocrity." members of the lower stratum would, he said, frequently produce offspring superior to themselves. Some of their offspring might be as bad as themselves or perhaps even worse, but, on the whole, it would be better. And the same thing would happen in the next generation, and again in the next, until the standard of the mediocrity had been reached. Assuming this law to be true there was some plausibility to his demand for a change in the relative fertility of the two stocks. Both would raise the average. From the foregoing it is evident that Galton's aim was the reproduction of animal of physical fitness. He did not, however, exclude mental and moral fitness, but these, especially the moral, would seem of less urgency than the physical.

Mendel, working independently during the same period of Galton, and probably knowing nothing of Galton and unaware of eugenics, began experimenting in cross-fertilization of plants. He discovered two great laws of heredity. His chief experiments were with peas. Taking two races, the tall and the dwarf, he found the first generation of hybrids were all tall. But when these hybrids in their turn were sown, the resulting plants

were mixed, some being tall and some dwarf, and they were mixed in definite proportions, there being three tall to every one dwarf. To the quality which appears in the children of the first parents is given the name "dominant," while to the quality which disappears in the children, but which reappears in the grandchildren is given the name "recessive." The first law then is: when two races, possessing two antagoristic peculiarities are crossed, the hybrids exhibit only one, and as regards this character the hybrid is not distinguishable from the parent. There are no intermediate conditions. second law is: that in the formation of the pollen or egg-cell, the two antagonistic peculiarities are segregated, so that each ripe germ cell carries either one or other of these peculiarities, but not both. This in brief, is the law of Mendel and through Batson and others it is sought to apply Mendelianism to the improvement of the human race.

The dominant and recessive qualities in man are, in their respective proportions, reproduced. A weakness, for instance, may not be fully inherited, but at least the tendency to it is inherited and the evil may develop in a favorable environment. Therefore, when a person afflicted with one of the recognized racial evils, he must be discouraged from propagating his kind; or when a child is born with a tendency to a racial evil, it must be kept away from the environment favorable to the development of the evil.

Other writers have followed in the wake of Galton and elaborated the science he had called forth, each with ideas more advanced and theories less compatible and some more repugnant than his.

Of these, Crackenthorpe, Tredgold, and Rentoul belong to the class of "Restrictive Eugenists." Nietzsche has his "Superman," and Shaw, who is in a class of his own, in his writings, says, "what we need is freedom for people, who have never seen each other before and never intend to see one another again, to produce children under certain definite public conditions, without loss of honor." What can be more repugnant than this return to animalism as advocated by Shaw, and who would welcome an improved race with such a means to attain the end?

Scientific race culture demands, at least, that instinct shall be subservient to intelligence, and intelligence subservient to love. Another eugenist splendidly answers Shaw and strikes a keynote in eugenics, and while we cannot accept his theory in its entirety, still it immensely improves on Shaw's brutality.

Saleeby, taking Ruskin's maxim "there is no wealth but life," in his doctrine of maternalism, insists upon the dignity of motherhood. He carries on an incessant war against those writers and economists who are in favor of permitting infant mortality. Once the life is in being it ought to continue its being. To deny this is immoral and to work against the eugenic end. He would prevent the unfit from coming into existence, but once they are in existence, we must make the best of them. In order to produce the wealth of life, it is necessary to study what he calls survival values, those qualities which enable the individual to struggle along and live against adverse circumstances. he concludes, and rightly concludes, that there is in the psychical element in

man rather than the physical which has the best survival value. This psychical element, moreover, is not merely intelligence, but also love. He writes "without love no baby could live for twenty-four hours. Every human being that exists or has existed, or ever will exist, is a product of mother-love or foster mother love. No morals, no man." Again he writes, "with all deference to Mr. Galton, I am inclined to think that the cardinal requisite for a mother is love of children. The woman who does not think the possession of a baby sufficient prize is no fit object, I should say, for any other kind of bribe or lure." Again he writes, "there is no wealth but life; and if the quality of life fails, neither battleships nor libraries, nor symphonies, nor anything else will save a nation. Empires and civilization have fallen, notwithstanding the strength and magnitude of the superstructure, because the foundation decayed; the bigger and heavier the superstructure. the less could it survive their failure."

The keynote of Saleeby, the dignity of motherhood and the furtherance of love between mother and child is the keystone of the arch forming the gateway to civic worth and greatness, and the accomplishment of what is desired, namely, the creation of the eugenic man. This keystone supported by those other great pillars of civic improvement, namely, education, improvement of social conditions both at home and at working places, campaign of education by lectures and public addresses to parents upon the effects of racial diseases, which tend to render the race extinct, education for those of marriageable age to dissuade those physically unfit from entering into

matrimony, segregation of those physically and mentally unfit to compete in the world, and segregation and isolation of the criminally unfit, the inculcation in the youth of the principles of religion, so that youth may be trained to man's estate in the right direction, and last but not least, strict laws against the destruction of child life and causing invalidism in mothers through abortions.

When Babylon was in its infancy the bond of love and affection between mother and child formed the buckler of the State, and during the countless ages elapsing from those times until now, the same affection and mutual regard have been the mainstay and balance wheel of our institutions and affairs. It was a mother's love and pleading that turned the expatriated Coriolanus back from Rome and accomplished what Roman arms could not expect. Helena's maternal love and ascendancy over Constantine made possible the establishment of the religion of Christ in the palace of the Caesars, while the contrary in the case of Julian brought degradation, defeat and death to the Apostate. It is almost an axiom that under a good mother's care, success, happiness and eugenics flourish, while on the contrary, let the child break away from these influences, and ruin, disease and degradation follow in its mournful train. "Descensus Averno facilis est."

Again, who among you, whether you are still fortunately possessed of a mother and her love, or, who have been unfortunately bereft of her, does not at the present time look back to your childhood days and to her splendid sound advice, and yet remember the

first good thoughts instilled by her in her gentle manner, whether it was the childish prayer taught at her knee or her talks upon honesty and uprightness and later upon morality and good living. Is there anyone who would dream of questioning her honesty of purpose, or is there any power on earth that can convince you that she was wrong? No, the gentle ideas of goodness, uprightness, integrity and religion are too deeply ingrafted and burned in your mind to be lightly and easily removed by enthusiastic faddists who would subvert and overturn the whole fabric of home and its institutions and tear asunder the sacred ties of mother and child, in the pursuit of the ends they seek to obtain.

A furore has lately been raised in Chicago and other eastern cities over the question of teaching eugenics in the schools-forces have rallied to one side and the other and have practically raised two armed camps. Educators of ability are arrayed on both sides and the fight has waxed bitter and strong. Eugenics of the modern class in which the origin of things are plainly given, were taught in an eastern school with disastrous results to the morality of the pupils-and the line, "A little learning is a dangerous thing" fully and deeply applies. There are certain things in life which do not require confidential relations and they can be purchased and distributed by the State to the people at large. Education is one of these. Teachers who are fitted by education and temperament are employed, oftimes at salaries far below their worth, to instill into the youth a good healthy education. Education learning, however, do not require the confidential relations as does the implantation of morals so necessary for the future of the child.

Confidences of this nature are best held between the child and the one to whom his tales of woe, his sorrows and his joys are told and where he finds the readiest response and deepest sympathy to his real or fancied troubleshis mother. Education of the parents by lectures upon racial diseases impairing the vitality of the race and kindred subjects are the main adjuncts to the influence of the mother. Direct your energy, not on the unformed or untrained mind of the growing child, but upon the matured and developed parents, especially the mother. Expounding and explaining racial diseases, their causes and terrible results in her gentle way, she will impart it delicately and sincerely to her sons and daughters with far better results than can be obtained from a stranger. This educational campaign should also extend to and include those of marriageable age with a view of deterring those physically unfit from entering upon matrimony, but it will not entirely eliminate such marriages. In the same way that education will in some cases fail, so will laws made for the same purpose fail. With our different laws in different States, who can be prevented from marrying in one State and removing to and living in another, regardless of being afflicted with a racial disease? The "Civis Romanus sum" of Paul applies even to this day. Again, with legislators afflicted with different ills, who can expect them to pass laws in consonance with the extreme eugenic idea on racial diseases, when many are afflicted with the same diseases that they would be called upon to legislate against?

Who would legislate against himself or his own? Who will prove the Brutus and condemn his own son? The great trouble with the eugenist is beginning with false premises leading to wrong conclusions. He commences with the idea that his plan is superior to that of the Creator, that the conditions of the many centuries past were all wrong, that the system of creation, as designed by the Creator can be improved upon by applying the method of breeding as in horses and that he and his companions can improve the child's condition better than the mother. The analogy of the race horse, which has been cultivated and nurtured for ages and brought to perfection, is cited as an example of what he can do and will do with the human race, by what might be called scientific breeding, possible after the brutal manner as suggested by Shaw, as cited above, but we should call his attention to the experience of Frederic of Prussia and his experiment of marrying his giant guardsmen to large women with a view of raising a race of giants. His experiment, at least as far as it went, failed and to his amazement and disgust the progeny brought forth, was not larger or stronger than the former ones, resulting from ordinary marriage of selection by individuals. Probably Frederic did not have sufficient time for the development of his theories, but with his failure and the natural repugnance of applying brood-farm methods to our own families. I feel that sane and conservative people will refuse to countenance such procreation. To advocate and countenance the method and system of Sparta, would deprive the world of master minds of the type of Byron, Julius Caesar, Napoleon, Milton and Agesilaus. Would any sane man claim that Byron, who was lame and deformed, or Julius Caesar, who was an epileptic, or Napoleon, who had some mysterious malady, probably syphilis, or Agesilaus, who was lame, or Milton, who was blind, or Tully, the great commander in the Thirty-years War, who was misshapen, ugly and deformed, was unfitted to live? Yet. under the Spartan system, all of them would have been destroyed and the world deprived of those great makers of history. Are there not enough children roaming through life ignorant of their paternal origin, without increasing the number through Shaw's suggestion? Are there not enough children, orphans, who lack maternal care in the world, without increasing the number by the practical application of a system that would deprive those who have mothers of that care and affection? Seek where you may the old fashioned home life cannot be improved upon and a return to those customs and systems will advance the race materially.

Let us unite in promoting true eugenics. That type in consonance with liberty, reason and truth. That type seeking the sound mind and sound body, through education, methods and systems, together with the public press and the use of the pulpit for the same purpose. That type recognizing and fostering the home life and the ties of mother and child. That type fostering and promoting the dignity of motherhood, so that the words of the mother of the Gracchi, "These are my jewels," may be made immortal and live forever: That type aiding in the saving of infant life before or after birth. That' type seeking for the betterment of all sociologic conditions and the elevation of humanity generally. With eugenics of this class, we, or future generations will see a vast improvement and even perfection, if such be possible, and in viewing our work will be able to say, "I have built a monument more lasting than brass, and of more grandeur than the lofty site of the pyramids."

BE A MAN.

C. M. Mayes, M. D. Roswell, New Mexico.

(Chairman's address, Section on Practice, Thirty-third Annual Meeting New Mexico Medical Society, Albuquerque, New Mexico, Oct. 5-7, 1914).

This address is a departure from the ordinary "ministerial" discourse in that we shall dispense with the opening hymn and the taking of the collection.

We do not hope for a large number of converts. We shall, however, propound some facts that should be oftener discussed. Facts that should not be.

"For our first lesson," I read a chapter from the scroll of memory.

I stood by the bedside of a boyhood companion. A negro slave. The serious look and the soft tread of those present, conveyed to my youthful mind the fact that there was a battle between life and death. The "family doctor" had called for consultation.

At the appointed hour on the morrow came two physicians from a distance.

Learning that the doctor they were to meet had not arrived, they sat in a room apart from the cabin where the sick boy lay, until the arrival of the physician in charge. I wondered why these men who came so far did not do something for my suffering friend and playmate. I wonder no more. They were men. Finally the good man came, and as the three emerged from the sick chamber, I felt that they were thoroughly capable in any battle with death.

The three sat long in consultation, returning occasionally to the bedside for further examinations. He in charge always assuming the lead.

Finally the "town doctors" departed. Before leaving the spokesman delivered the following message: "We all agree that the boy is seriously ill. The disease has been correctly diagnosed and scientifically treated. Follow your physician's advice and know that all has been done that could have been done. If we can be of assistance to him he has but to call."

Our good doctor who had so faithfully watched and labored with us, remained with the patient that he might note any change in the course of the disease.

Before leaving he must have noted a change, for he left additional treatment and directions. Do you often meet this condition? Do you admire the situation? Have you been treated differently?

For our second lesson, I read you from an unpublished allegory.

"I stood at the threshold of life and beheld before me as it were a vast forest of oak trees."

At the edge of the forest were many trees that from baffling with the winds and bad soil were somewhat dwarfed in growth, but withal rugged and healthy.

When I came within the forest I

found that what appeared to be all health and symmetry of growth was marred often by trees that were crooked, gnarled and ill-shapen. Some were rotten at the heart and scarred by time. Some were mere saplings, stunted of growth, choken for want of sunlight, while here and there were just weeds. Many had fallen in the dust and were rotting, yet they lived cumbering the earth and crowding the living.

At the further side of the forest I came to the clear waters of a lake which reflected my own image, and I beheld myself a member of the forest of trees. Long I gazed upon that reflection and I was not proud. While I was yet alive and vigorous, I did not appear so symmetrical and healthy as I had felt and thought.

I shall take as a text Arts, 3 and 4, Chap. 2 of the Principles of Medical Ethics.

Again I depart from the general rule, and omit the reading of the text.

Now, I have always maintained that the code of ethics was not intended to benefit the physician, but to let the world know how we viewed matters. How we felt about it. The laity neither understand nor agree with its declarations.

The healthy, symmetrical tree cannot be distorted. The ill-shapen will be crooked still. An honorable member of the profession has a code of his own that coincides in every particular with that issued by the American Medical Association. A small minority are just crooked, will not be otherwise, code or no code.

The Consultant. The laity either from instinct or from observing the expression of the physician in charge

are quick to see the necessity without reservation or hesitation. If not suggested by those interested, we should make the request, when the point is reached where we feel that we may ennance the condition of the patient by such help.

In the selection of a consultant, the first choice should be left to the physician in charge, and neither social intimacy nor ties of friendship should influence the choice. He whom you think best qualified to give advice and help should be demanded. As between two or more men of equal ability, the choice may be left to the family

The saying that "when you catch a live one call consultation" should be beneath the dignity of the profession. Only the benefit of the patient should be considered.

Punctuality. A disregard for punctuality is a habit, either congenital or acquired. It should detract very largely from a man's popularity and success. The consultant who is habitually late in meeting an engagement, is late for the same reason that some women are late at church or the opera. Carelessness or a desire to appear important, to be seen.

There are few instances where the above is not the rule, and yet some physicians as some ladies are invariably late.

We are now in the room with the patient, where often every rule of ethics, of decency, of manhood is violated by the consultant.

Those who are not guilty will agree with me. Those who are, know it, and will be guilty at the next opportunity.

I mention a few of these violations, and I would that I had the brush of a

Dore that I might paint the picture so hideous as to disgust the perpetrators. I shall mention a few of the many that (vulgarly speaking) I've had "put over" me.

First. That air of mental superiority, of dignity, of egotism that only years of practice and unlimited gall can acquire. The shrug of the shoulders that means so much to the anxious as they inquire as to the result had some other course been pursued. The lingering on the threshold for a parting sympathetic whisper. The employment of some diagnostic method wholly unnecessary that for sure has not been employed heretofore in the case, and at the same time will impress upon the onlookers your carelessness or absolute ignorance. The usurpation of the first place of importance in the case, with a promise of a return call, without an invitation. Answering a question directly that should have been addressed to, and answered only by the physician in charge. The gratuitous giving of advice publicly. The remark "you should have called me earlier." Insisting upon a change of treatment, when such change cannot conserve any good purpose, but work to the disadvantage, possibly the undoing of the physician in charge.

But I desist. The picture, withal so repulsive, is not complete, but familiar.

Upon the other hand, do you remember, when after days and nights of work, worry and discouragement, you called in consultation a man?. After the case had been discussed from every angle, the diagnosis and therapeutical procedure had been agreed upon, the man remarked, "Doctor, I can find no error, I can hardly realize that your procedure has not brought results,

suppose you try the following, if it meets with your approval;" and then going into the presence of the anxious friends and relatives the man tells them that there is no difference of opinion. Then privately—"your doctor has handled the case remarkably scientifically, follow him and be satisfied that the most that man could do has been done." You haven't forgotten it, and in the years to come there remains in your memory that man's face surrounded by a halo.

The Social Life. The social side of the life of the physician is a necessary diversion, and should be entered into as often as practical. It should be the means of getting away from care, from the bedside, and from books. And in the getting away, practice and worry should be forgotten.

Religion I believe to be almost as much of a necessity on the part of the physician as on the part of the minister, and yet the all too common practice of church membership for revenue is so damnable that words fail to express adequate contempt. Any one who would be guilty of the practice would double-cross the Master and defile the sanctuary.

Reports of cases, clinical reports, hospital news and bedside narratives should not become a part of social intercourse.

However well he may adore the patient of his colleague, and however much he may feel socially inclined, no visits are permissible except upon the invitation of the physician in charge. A man doesn't do this. Others should not be permitted.

Sec. 3 of Art. 4 is short and I read it. "A physician should never take

charge of or prescribe for a patient who is under the care of another physician, except in an emergency, until after the other physician has relinquished the case, or has been properly dismissed."

The word "properly" in the last line of the section should convey the meaning, carrying with it a verbal or written dismissal, together with payment of bill or some other satisfactory settlement for services rendered.

Sincerity. He who violates Sec. 4 of Art. 4 wilfully will violate the whole code, smash the decalogue and take advantage of any other murderous meanness that may present itself to his distorted brain. And yet, strange to say, such monstrous products of illegitimate conceptions do exist.

The most charitable view we can take of this "thing" is that "it" does not see beyond the effort to belittle and injure. Comments and criticisms are a stab in the back, a thrust in the dark, but a far worse, and a more damnable result is the regret in the minds of those interested, that if they had called some one else in the beginning of the illness a life perhaps may have been saved. This regret rankles and lives though the grave is neglected and the date of death be forgotten.

In this arraignment I may speak of those who may be called in an emergency. Those called while the physician of choice is absent. Those who by accident or otherwise become possessed of a case not his own, are lothe to relinquish such patient to such an extent that no law of decency permits a man to assert his rights, and only a demand on the part of someone in authority is adequate to loosen the bull-dog grip of the avaricious freak.

The very nature of the healing art, the sorrows of the sick room, the teachings of the masters and the example of the physician of Gallilee all tend to make men of us. Yet the deplorable fact remains that the profession is infested by a small minority referred to.

The diagnosis is made, the pathology is obscure. What of the treatment? Ave there's the rub!

I have few suggestions. All efforts at reformation fail. I once heard Dr. J. N. McCormack say that if you could get the "thing" into your County Medical Society, and there give him a position of trust, perhaps make him president, would work a reformation. It won't work. It is excrescence upon the body medical that only death removes. Speak well of it if you can. Avoid it as you would a pestilence. Don't fight it, for publicity is its greatest asset.

"Oh thou, who man of baser Earth did'st make

And ev'n with Paradise devise the Snake:

For all the Sin wherewith the Face of Man

Is blecken'd-Man's forgiveness give —and take."

-Omar Kahyyam.

SNAKE POISONING, SYMPTOMS AND TREATMENT.

> A. J. Evans, M. D., Elida, New Mexico.

(Read by title at the Pecos Valley Medical Association, Roswell, New Mexico, 1914).

The principal poisonous serpents in

North America are the rattlesnakes—of which there are several species, usually placed at eighteen—the Copperheads, the Moccasons, and the Vipers. Some of these have moveable poison fangs, some fixed. In other parts of the world others equally or even more poisonous are known.

The poison gland is analogous to the parotid in location and structure. The duct which runs through it is so dilated as to contain a small amount of the peculiar poison. The amount of poison contained in these reservoirs varies from eight to twelve minims, and is secreted somewhat slowly. It seems to be in some cases at least, a glucoside; in others, a toxalbumin. It is capable of being preserved either dry or in alcohol or in glycerin. The active poisonous principle seems to pertain to a globulin or to a peptone. Almost all of these venoms are innocuous if swallowed, and like septic infections seem inoculable only through the tissues and the circulating fluids. According to Mitchell, the venom of the rattlesnake renders the blood incoagulable, paralyzes the walls of the capillaries, and facilitates escape of leukocytes into the tissues, thus making actual hemorrhagic swelling occur, while the red corpuscles rapidly lose shape and fuse into irregular masses and their hemoglobin is dissolved or disappears. This poison seems to paralyze both the respiratory centre and the heart.

Symptoms. A snake bite is like a hypodermic injection of a deadly poison, and symptoms set in promptly. These are both local and general. There is more or less local pain, or may not have any local pain at all, with swelling and discoloration, which are due to effusion of blood. They increase in

intensity, and are followed by vesication and necrosis of tissues—that is, gangrene—if the patient survive for some time. Constitutional symptoms are not long delayed, and are characterized by severe prostration, including cold, clammy sweat; feeble and rapid pulse, irregular respiration, etc. When patients succumb, they usually die in collapse. The pathological changes are not well-marked or characteristic

Treatment. Treatment of snake bite must be prompt if it is to be successful. It should consist of incision and drainage of blood from the part, in order to prevent diffusion into the rest of the body by means of the returning blood and lymph. Bleeding should be facilitated by cups or by sucking the wound. An elastic tourniquet should be applied around the limb, at three places, removing one at a time at intervals of two to three hours, the site of the wound excised or freely incised, and the blood worked both ways toward the wound by "stripping" the member. If there be any known antidote to snake poison it consists of potassium permanganate or calcium hypochlorite, applied locally in solution, the former sufficiently strong to have a marked color and capable of producing local irritation (1 or 2 per cent).

With these local measures, constitutional stimulation should be indulged by means of volatile and other stimulants. There is a popular fallacy in favor of inducing alcoholic intoxication. To do this is a fatal mistake. Nevertheless alcohol may be given freely, dosage being limited not by amount but by effect. Strychnine, digitalis, atropine, etc., will often prove serviceable. The tourniquet should be

gradually released after being in use for several hours, and an assistant ready to antidote the poison which may then inter the system with the necessary doses of stimulants above mentioned. One-half grain of strychnine may be administered in divided doses, it apparently being an antidote to the snake venom. There is much reason from recent experimentation to expect benefit from serum therapy—i. e., by injection of serum from immunized animals who have been fortified by increasing doses of the snake poison. Sewall found that pigeons could gradually be accustomed to increasing doses of venom, until as much as ten fatal doses could be given without producing death. Calmette carried the investigation further, and produced immunity in guinea-pigs and rabibts against the venom of different varieties of poisan. He also proved that the serum of these animals had protective power. later, after much difficulty, immunized horses to obtain a protective serum for man. He required as much as six months to immunize a horse sufficiently to obtain a potent antitoxic serum. The serum is quite stable, and retains most of its efficacy for a period of two years. Dried antivenin in sealed packages will last almost indefinitely. The serum is tested by giving the rabbit an intravenous injection of 1 c. c. of serum, and then, five minutes later, a fatal dose of venom.

The average amount of poison injected by the severe bite of snakes is believed to be about 0.25g; this would require from 100 c. c. to 300 c. c. of the usual strength of antivenin placed on the market to neutralize it. If the antidote is injected directly into the vein, its action will be much quicker

than if given simultaneously. The longer the delay, the greater will be the amount required to neutralize the poison.

Noguchi found that the action of the antivenin was almost wholly specific for the neurotoxic and hemolytic poisons of the species of snake from which the immunizing poisons were obtained. and had little effect on the poison of other species. This difficulty is overcome by injecting the same animal with several different poisons, so as to make a poly-valent serum. The only trouble is to get the venins of the snake of different countries. At present it is difficult to obtain a serum which is concentrated enough to be very efficacious in the more dangerous bites. This, and the difficulty of having it at hand, restrict its usefulness

CHOLELITHIASIS.

W. T. JOYNER, Roswell, New Mexico.

(Read before the Pecos Vallet Medical Society, Roswell, New Mexico, 1914).

It is not the purpose of this paper to cover the whole subject or to present anything new, but to briefly review the etiology and treatment. Cholelithiasis or gall-stones is a very common condition and on account of the confusing symptomatology of diseases of the digestive tract nearly all diseases of the gall-bladder and bile tracts are not recognized as such early, and are frequently permitted to develop into serious and dangerous complications.

It is quite probable that most gallstones are formed in early adult life between the ages of 20 and 40, corresponding with the period of greater frequency of typhoid and other infections, and remain latent for years. The disorder is rare in infancy and childhood and in the majority of such cases is perhaps due to inter-ulterine infection.—Cases found in older children may have so originated and remained latent for years.

Gall-stones are more frequent in women than men. Of 1800 cases operated on by Mayos 76 per cent were in The disproportion is acwomen. counted for by several facts, viz, sedentary habits are more common in women and constituation is more frequent; pregnancy and tight lacing, disturbing the liver are predisposing causes. The frequency of pelvic infections women is an etiological factor, either by serving as the source of infection or causing the formation of adhesions. Diet has considerable influence on the production of gall-stones and is explained as follows; the normal salts of the bile, viz. sodium glycocholate and sodium taurocholate are produced by the metabolism of nitrogenous These salts hold cholesterin, foods. the most important ingredient of gallstones, in solution. When they are diminished in amount by a lessened ingestion of nitrogenous foods the cholesterin precipitates; thus, to this cause is attributed the great prevalence of gall-stones among people who use little nitrogenous foods (the Germans), and gall-stones are infrequent in diabetics since their diet is mainly nitrogenous, while in the gouty, who limit nitrogenous food, they are common. Heavy eating and the excessive use of alcohol are of much importance in the

etiology of gall-stones by producing gastro-intestinal catarrh and chronic congestion of the portal system. One necessary factor, however, in the production of gall-stones is a low grade of inflammation of the biliary tract; the second factor seems to be some obstruction to the free flow of bile. The one without the other factor is not sufficient. Whether a third factor is of importance remains to be determined. There is no evidence at present that gall-stones are caused by constitutional derangements unconnected with the invasion of the gall-bladder by microorganisms. Catarrhal inflammation of the biliary tract is set up especially by typhoid and colon bacilli, and apparently by attenuated streptococci, staphylococci and other micro-organisms. It is essential for the formation of gall-stones the antecedent catarrh be mild since in severe infections the mucosa of the gall-bladder is likely to be destroyed and its cholesterin producing function abolished. About onethird of all cases of gall-stones give a previous history of typhoid. Usually the infective agent reaches the gallbladder directly through the common duct and by way of the portal circulation. It is doubtful whether the infective agent can pass up the common duck while the flow of bile remains normal: if, however, any obstruction occurs the organisms are then able to gain access. The second factor in the production of gall-stones, viz. obstruction, always, in some degree, accompanies infection. Among the conditions which may interfere with the free flow of bile and thus act as the second factor in the production of gall-stones are tu-

mors or foreign bodies, round worms within the ducts, tumors without the ducts, kinks due to distortion or cicatrices compressing the ducts, sedentary habits and lessened secretion of bile: thus, laborers and others who work much out of doors are not subject to gall-stones while they are very common in women, and men of sedentary habits. Obesity and disorders which interfere with the free movement of the diaphragm may also be mentioned as a cause of stagnation of bile. The time needed for the formation of biliary calculi cannot be determined. One case of empyema with numerous calculi was operated on three and a half months after an attack of uncomplicated typhoid. Once formed they do not tend to disappear except by escape through the common duct or a fistulous communication or by removal at operation.

Treatment. It is irrational and futile to attempt to dissolve an insoluble gall-stone by internal medication; to cause the passage of a stone through the biliary ducts when the stone is larger than the ducts, to attempt to cure supposed stomach troubles when the symptoms are due to adhesions about the gall-bladder or to attempt to cause the solution of these adhesions when they have been diagnosed. The etiology of cholelithiasis suggests certain prophylactic measures. Gallstones being most common in women, in the obese, in those who eat too much, lead sedentary lives and are constipated and addicted to alcohol, the correction of these very obvious etiological factors is important, Women who have lax abdominal walls from repeated pregnancies should wear supports, and whether they have been pregnant or not should avoid tight laving.

When gall-stones has been diagnosed the indications for treatment are, First: To cause solution of the stone or stones. Second: To cause them to be discharged. Third: To treat the complicating infection.

It is exceedingly doubtful whether spontaneous solution of gall-stones ever occurs in the human subject or whether it is possible; and even if it should be possible the good that would thereby be accomplished is doubtful since the residual particles would remain in the gall bladder and form the nucleus of new calculi, their formation being favored by the pre-existing infectious inflammation of the mucous membrane. This reasoning is borne out by clinical experience. We know that gall-stones said to have been passed by the bowel after the administration of olive oil are merely masses of saponified oleic acid resembling gall-stones in outward appearance.

Discharge of Gall-Stones: Gall-stones may be discharged by way of the ducts or by way of a fistula. Single stones sometimes pass through the ducts, many stones rarely pass. Large stones, if discharged, always leave the gall-bladder by fistulae, and when they pass we must assume a gall-bladder colonic fistula. If a single stone only is in the gall-bladder this is a possible means of cure but the possibility is too remote for serious consideration. The one object of medical treatment is to treat the infection of the biliary tract and thus restore the

latency from which the gall-stones. have been awakened: in other words, to control the infection at the basis of gall-stone activity. By surgical measures we may remove the gall-stones and also treat the biliary infection. By medical measures we may, in some cases, bring about a condition of virtual cure, that is, latency, or sterility of the biliary tracts; but we must not subject our patients too long to useless medical treatment when early surgical intervention may restore him to health; besides, delay may not only add to his miseries but actually hasten the final end. The symptoms of hiliary infection calling for treatment may be acute or chronic. The pain of gall-stone colic is usually so severe as to require the administration of morphine which not only relieves the pain but mitigates the shock. Coal-tar products should never be given in these cases, as they add to the depression of an already depressed patient. In some cases where the patient is very much depressed whisky or brandy in hot water, and camphor hypodermically may be used. Upon the subsidence of the pain the medical treatment is, to promote the free flow of bile and thus effect the discharge of infecting bacteria and their toxins from the biliary passages and by this, and other measures we may allay the inflammation and ultimately the biliary tract may be rendered sterile and a condition of latency in the activity of gall-stones result. In rare cases this latency is permanent and the patient experiences no further trouble. In most cases, however, a low grade of chronic catarrh rersists; in others the gall-bladder readily again becomes infected and

thus the patient is continuously or intermittently ill. The phophylactic measures already mentioned are of the greatest importance. Diet should be carefully regulated having in mind the etiology of the condition. Foods which set up or continue a gastro-intestinal catarrh should be avoided. In most cases alcohol should be prohibited. Large amounts of water, especially alkaline mineral waters, containing sodium salts, are useful. Saline cathartics, Magnesium and Sodium phosphates, may be used instead of mineral waters. Salicylic acid, both by increasing the flow of bile and its antiseptic properties, is very useful. It may be combined with Sodium Bicarbinate or Sodium Benzoate. Urotropin has been demonstrated in the bile and pancreatic juice after large doses and by giving large doses, 75 grains in 24 hours, has a decided bacteriacidal action. Oxgall also stimulates the flow of bile and thus favors drainage. It should be administered as Sodium Glycocholate, 10 to 15 grains daily. Ammonium chloride has been much used and is doubtless sometimes useful by its effect on inflamed mucous membrane and by promoting the much desired thinning and free flow of bile.

Surgical Treatment. The question of when to operate in cases of gall-stones that are or have been active must be decided in each individual case, but we should bear in mind that it is not the many stones in the gall-bladder that does the damage, but the one or two stones that get into the ducts; that the risk in operations for gall-stones increases with delay, and that while gall-stones are easily removed from the gall-bladder their re-

moval from the ducts is often difficult and sometimes impossible. time of election for operation, therefore, is before the stones get into the ducts. If the gall-bladder is large and the stones have caused local discomfort or distress, operation should be undertaken at once. Two or three attacks of gall-stone colic should be looked upon as a positive indication for immediate operation and if the patient hesitates the pathological changes and the probable course of the disease should be explained to him and he should be required to make the decision for or against operation and assume the responsibility.

Mayo says that in gall-stone disease surgical interference should be instituted as soon as the diagnosis is certain and that nearly every argument that is used for early operation in appendicitis applies with equal force to biliary calculi. The greatest difficulty will arise in deciding to operate on those patients showing vague symptims usually supposed to be gastric, but this is more a question of diagnosis than of treatment. The impaction of gall-stone with chronic jaundice calls for early operation. The risk of operation in these cases is the risk of delay, since delay means probable serious infection of the bile tract and the tendency to hemorrhage increases with the persistence of .-undice.

Operative measures are justifiable in all cases of gall-stones, since in a large majority of cases they attain that which is impossible of attainment by medical means and early intervention tends to prevent the development of serious complications and sequelae.

Abstracts

The Heart in the Pneumonias.

The importance of the cardiac condition in pneumonias is again emphasized by R. N. Willson, Philadelphia (Journal A. M. A., Sept. 19, 1914). Many writers have commented on the fact that in some cases of fatal pneumonia the heart seems very little affected. These cases are practically always examples of intense fulminate poisoning in the co-called croupous or fibrinous type of the disease, overwhelming the nervous system and causing death before the heart seems to be seriously affected. Willson maintains, however, that the heart shows post-mortem evidences of the toxemia in every case of pneumonia, whatever its type, when it is microscopically examined. Before using the bloodpressure as an evidence of cardiac competence or insufficiency, it has to be shown that in sthenic pneumonia the customary or normal pressure is due to an overacting or at least a capable heart; while in the lowgrade or asthenic pneumonia the low pressures are due to an incompetent cardiac mechanism rather than to vasomotor failure. From his studies of over 700 cases of all types he has found more frequently than otherwise a normal blood-pressure in asthenic pneumonia, but he has yet to see a patient of the bronchial catarrhal type with a high or even normal systolic bloodpressure. The diastolic pressure elicited by the auscultatory method furnishes a fair index of the vasomotor tone, and, while usually depreciated in asthenic pneumonia, it falls by no means in a measure commensurate or parallel with the cardiac In his experience the systolic pressure has been an uncertain prognostic index. The majority of the low-grade pneumonias have shown it almost con-

stantly lower than the pulse-rate, and yet the vast majority of patients, under proper treatment; have recovered. The current notion that death in pneumonia is due to vasomotor paralysis may be true in some sthenic cases, but there is very little to support it in the bronchial type of the The most telling advantage in treatment seems to come from the systematic and thorough evacuation of the bowel, in many cases the toxin manufactory, and when it has been neglected the heart suffers in a measure not explained on the theory of purely mechanical embarrassment. Stimulants like nux vomica, quinin, camphor and digitalis may sometimes help as indispensable temporary crutches, but such remedies as epinephrin and pituitary extract are, he thinks, dangerous with a weak heart. In asthenic fibrinous pneumonia almost any treatment may be employed, as, in a vast majority of instances, otherwise healthy nonalcoholic patients should recover, but a bronchocatarrhal patient nourishment instead of depletion and warm instead of cold, stimulating air oxygen. He says in conclusion: "Without attempting to minimize the influence of the vasomotor system in the causation of a high mortality in pneumonia, it would seem as though we ought not to be satisfied, on the basis of either clinical or laboratory experience, to regard the heart in any other way than as the factor of prime importance in the safety or danger of the great majority of asthenic pneumonia patients. More and more does the prevalent pneumonia seem to be tending away from the well-recognized, frank sthenic type, to the low-grade, asthenic, bronchocatarrhal forms. The more certainly this is true, the more inevitable will be the necessity of safeguarding the heart from start to finish, not so much by the use of drugs.

as by their avoidance (especially cardio-depressants like nitroglycerine and alco-hol), not so largely by treatment as by the studious prevention of an overdose of solicitous care. Hygiene of the intestinal tract, sane feeding, the intelligent use of an abundance of clean air of the right temperature and the insuring of ample periodic rest in the form of freedom from the doctor, nurse and family—these measures will go farther than any others toward supporting the organs whose staunch cooperation is essential to the happy outcome of the case."

Poisoning by Male-Fern.

An unusual case of fatal poisoning by the administration of male-fern as a vermifuge is reported by M. C. Hall, Washington, D. C. (Journal A. M. A., July 18, 1914). The patient was a young man who suffered from constant hunger and feverishness at night and was prescirbed for by a so-called "Quaker doctor" or Indian doctor of Joplin, Mo. He died in convulsions and with tetanic symptoms after taking a large quantity of what appears to have been extract of male-fern. The striking features of the case are, first, that there was no evidence that the patient had tape-worm, and secondly, that a doctor should send a poison as strong as loleoresin of male-fern in excess of the usual dose to be given to a person in ancotherestate and followed up by castor-oil which increases the absorbability and toxicityabbatheadrugaa There was always the possibility that consulting by letter an advertising "Indian bor Quaker doctor" may chuse as patient's death.

.airanthqia ehronic sinusitis.

Active immunization by toxin-antitoxin was first-used by Behring in 1913 Since then their reports concerning it have been

somewhat varying. W. H. Park and A. Zingher, assisted by M. H. Serota, New York (Journal A. M. A., Sept. 5, 1914), give their personal experience with the method. During the past twelve months. they say, the attempt has been made to immunize actively against diphtheria the patients in the scarlet-fever wards of the Willard Parker Hospital, where an average of about one-quarter of the inmates are diphtheria carriers. "For this purpose mixtures of diphtheria toxin and antitoxin were prepared, either neutral or slightly toxic to the guinea-pig. A strong diphtheria toxin was used, where the minimum lethal dose was 0.0023 c.c. and L+ dose 0.27 c.c. The mixtures represented B 50 per cent., A 66 per cent., G 66 per cent., F 80 per cent., and E 90 per cent L+ toxin to each unit of antitoxin. One c.c. of Mixture E caused when injected into a guinea-pig at first a slight local induration and then in about twenty days paralysis." The injections were made subcutaneously or intramuscularly in doses of from 0.25 to 1 c.c. of undiluted vaccine: a few of the non-immune persons received as high as from 3 to 5 c.c. at each injection. The dose was repeated two or three times at intervals of three to seven days. The injections were made posteriorly in the intrascapular region. The local reactions consisted as a rule of varying degrees of redness, induration, pain and tenderness, according to the size of dose or individual susceptibility. The results of the active immunization were controlled by determining the antitoxin content before the injection, again three weeks afterward or a little more, similar examinations were made: They found that persons with natural antitoxin gave a ready response attomative immunization, while others without it failed to do so in a considerable proportion of cases. Their year's

experience assures them that persons with a negative Schick reaction can be safely exposed to diphtheria. Those exposed to infection should be passively immunized, but the use of the Schick test will eliminate the necessity of immunizing about two-thirds of those subjected to exposure. Those found to be naturally immune continue as a rule to remain so. They conclude that active immunization certainly has a future. The exact value and the conditions under which it will be used are to be determined in the future.

Diet in Typhoid.

L. F. Barker, Baltimore (oJurnal A. M. A., Sept. 12, 1914), reviews the recent literature in regard to the diet in typhoid, and points out the advantages of the high caloric diet. He cautions, however, against the dangers of over-feeding in certain cases, as pointed out by McCrae, and emphasizes the necessity of individualization. He is convinced that there are some patients that cannot bear the high caloric diet, and that has apparently been the experience in the Johns Hopkins Hospital, especially in the early stages of the disease. Coleman has emphasized the necessity of beginning cautiously, and recommends a pure milk diet for two days in all cases. The details of the nursing must be carefully worked out.

Food in Typhoid.

A partial report of an investigation on the effects of food on metabolism, with special reference to its use in typhoid fever, is given by W. Coleman, New York (Journal A. M. A., Sept. 12, 1914). He describes the unit apparatus employed and its method of use in estimating the heat production and the respiratory quotient, and gives the results. He suggests and asks whether it is not true that many

typhoid patients may have died because the loss of their body proteins was not prevented. While his results indicated the carbohydrate diet in this disease, he says the role of fat in the fever diet has not yet been completely learned. Observations to test its value are under way. At present he can only say from his clinical experience that he believes it to be an important constituent of the diet. His conclusions are given as follows: 1. Food does not increase the heat production or temperature in typhoid fever, even when given in large amounts (at least, when the quantity of protein is kept relatively low). Therefore, the fear which has been entertained by physicians for so many years that a liberal diet would raise the temperature of the patient is proved to be groundless. 2. The body utilizes carbohydrate in preference to fat or protein to meet the increased demand for energy in typhoid fever, just as it does in health when called on to perform additional work. Consequently, carbohydrate should occupy a prominent place in the diet."

Focal Infection.

The results of a cooperative investigation in the medical clinic of Ruch Medical College and Presbyterian Hospital of a number of infections conditions are reported by Frank Billings, Chicago (Journal A. M. A., Sept. 12, 1914). Cultural and functional tests and histologic examinations have been made and a more definite knowledge has been obtained of important facts relating to focal infection. This may be located anywhere in the body but the usual site is in the head, in the form of alveolar abscess, deep tonsillar or peritonsillar abscess and chronic sinusitis. Cholecystitis, acute or chronic appendicitis; submucius abscess anywhere, salpingitis, vesiculitis seminalis, prostatitis, etc.,

are examples of the local condition and secondary foci in lymph-nodes near to the primary focus become additional sources of continued and more general infection. Investigation may reveal more than one apparent focus of infection, which is important, as the sources of infection must be removed as the first step in treatment. Study of the tissues of the focus usually yield various bacterial organisms and varying strains of the same. The transformation of the strains in growth and special pathologic character as shown by the work of Rosenow and others explains the varying and often contradictory results of research workers. Probably the infecting agent passes through the blood. Billings notices certain conditions which affect the progress of the disease and the parasite, such as the low oxygen tension required by the streptococcus of arthritis deformans and the opposite nature of Streptococcus viridans which requires a high oxygen content and is productive of endocardial troubles. Acute rheumatic fever is of undoubted focal origin, and he gives cases showing the action of the germ on the thyroid gland in acute rheumatism which has been noticed as frequent in foreign literature. This incited study as to the possibility of focal infection as a cause of goiter and several cases are reported. With the defenses of the body diminished infection foci can better do their work and "the removal of the focus of infection is demanded as a fundamental principle in the treatment of the systemic diesases, especially of chronic type. Thereafter the management must be individual and based on the character and location of the infection. The attempt to immunize the patient against the infection must be attempted by restorative measures-food, pure air, passive and active graduated exercise, hematinic and other tonics, optimistic surroundings, etc. Autogenous vaccines may be used with rational reservation."

Work for the Sake of Health.

"There are, strange as it may seem at first thought," says The Journal of the American Medical Association in its issue of September 26, "certain modern industrial changes which carry with them detrimental features that are not apparent on the surface. A growing group among whom the amount of muscular work done is small in comparison with the daily activities of their ancestors is coming into existence." The Journal does not refer to the fact that shorter hours of work have everywhere become the custom-that the blacksmith who formerly toiled twelve hours now completes his working day in eight hours. The changes which it considers are a consequence of altered methods of conducting business with modern extension of commerce. Machinery has replaced muscle. The development of the industries by machinery has called for a different type of human working-power in which skill rather than strength is required. As a modern writer has expressed it, the bodily qualities of the worker have been forced by the employer more and more into the background of valuation. Industrial factory work requires not so much strong men as persons who can perform with skill the many small tasks which the machines have so far not been able to perform. Hence the tendency to employ children, half-grown persons and women.

More significant than this is the fact that the number of those who do little manual labor has increased greatly. This is an era of office workers, of business and governmental officials whose implements are the desk chair, pen and pencil, rather than the hammer and the hoe. Even in agriculture machinery has eliminated some of the hardest types of manual labor. Muscular exercise, however, is a benefit rather than a detriment to the human economy. It improves the function of the essential organs of the body. Hence there has arisen an unexpected consequence, namely, the habit of trying to avert the possible harmfulness of some of these changed conditions by "balancing the lack of paid muscle work by work for hygienic reasons, by play and sport." The creation of work for the sake of health sounds almost paradoxical.

The Etiology of Pellagra.

"Although pellagra has been known and studied for nearly two centuries," says The Journal of the American Medical Association in its issue of September 26, "not only is its essential cause unknown, but the broad question whether it is to be classed as a dietary or a communicable (contagious or infectious) disease has never been definitely determined. spoiled-maize theory has for many years been the favored theory abroad, but its correctness has, for various reasons, been questioned by many. In this country there has arisen, both in the lay and in the medical mind, the opinion that pellagra is to be classed among the infectious diseases. This view has received important support, first, from the Illinois Pellagra Commission and, more recently, from the Thompson-McFadden Commission (Siler, Garrison and MacNeal). The Journal calls attention to a recent issue of the United States Public Health Reports in which Goldberger gives a summary of certain work now being done by the United States Public Health Service on the study of pellagra, and advances some most suggestive facts which do not in any way support the infection theory, but strongly point to the belief that pellagra is a disease essentially of dietary origin; that it is brought about in some such way as, for example, by the absence from the diet of essential "vitamins," or possibly, as is suggested by work of Myers and Voegtlin, on the presence in vegetable foods of excesive amounts of a substance such as soluble aluminum salts.

Attempts to Transmit Pellagra to Monkeys.

C. H. Lavinder, Edward Francis, R. M. Grimm and W. F. Lorenz (Journal A. M. A., Sept. 26, 1914), give the results of their attempts to inoculate monkeys with pellagra. In their first experiment in the inoculation of pellagrous tissues, the brain, spinal cord and their membranes were ground, mixed with an equal volume of normal saline and allowed to extract in the ice-box for periods varying between one and eighteen hours and then filtered, without pressure, through gauze. The filtrate was injected intracerebrally, intravenously, intraspinally and intraperitoneally into rhesus monkeys. The buccal, thoracic and abdominal contents, except the intestines; the intestines and fecal contents, and the skin, were similarly treated and injected. Blood of pollagrins, after being either defibrinated or citrated, was injected intravenously and intraperitoneally into each of four rhesus monkeys. The pericardial fluid, the urine, the feces, the cerebrospinal fluid, were also used in the experiments. The animals were also fed pellagrous material mixed with spoiled corn meal. The animals used were rhesus monkeys, Java monkeys and baboons. In all, 103 experiments were made, in which material collected from pellagrins during life or at necropsy was introduced into the stomachs of animals; fifty-two experiments were made in which pellagrous fluids were injected and ninety-six in which extracts, suspensions or emulsions of pellagrous tissue were injected. The animals were exposed daily to the direct rays of th sun. Eight of the animals died. In four instances death was plainly due to some other cause than pellagra. In four the cause of death was undetermined. With one exception the surviving monkeys have so far shown no indications of pellagra. The authors conclude that no inference as to the communicability of the disease can be made.

The Treatment of Pellagra.

Carl Voegtlin (Journal A. M. A., Sept. 26, 1914), presents the treatment of pellagra from the point of view of the pharmacologist and the biochemist. Both are necessary, he says, for a clear understanding of the processes of nutrition and metabolism. He remarks that in the milder cases of this disease the symptoms will almost all disappear in a relatively short time if the patients are kept at rest on a liberal mixed diet with plenty of fresh meat. The difficulty lies in the fact that pellagrins are usually mentally defective and refuse to follow the directions of the physician unless convinced of its absolute necessity to their recovery. Consequently, psychotherapeutic methods must also be used to succeed with the dietary treatment. Relapses have been known to occur after patients have been exposed to the same conditions which caused the disease to be contracted primarily. The diet should not be reduced in case of diarrhea, and constipation is affected favorably by increasing the fats in the diet. As to the treatment by drugs, he remarks that Lombroso advocated arsenic as a specific in this disease, but in this country it has not met with such good results and its benefits have been denied. He calls attention to the fraudulent advertising of proprietary

pellagra medicines throughout the South, these preparations being without any real value in the treatment. The patient must be cautioned to keep out of bright sunlight as much as possible. Voegtlin believes that this disease is caused by a chronic intoxication produced by certain vegetable foods used to the extent of a dietary deficiency. In experiments with animals, fed on an exclusive diet of corn, carrots, sweet potatoes, etc., it was found that they developed within three or four days, gastro-intestinal symptoms indicating an intoxication and resulting in death in a remarkably short time. Extracts of these vegetable products, fed or injected into these animals, produced the same symptoms. It was discovered that relatively large amounts of aluminum compounds were present in these vegetable products. Toxic effects from these salts have been observed in both man and animals. Lessening the amount of vegetables ingested and adding eggs and meat to the diet relieves the injurious action of the vegetables on the alimentary canal. Voegtlin summarizes the causative elements in this disease as follows: A deficiency or absence of certain vitamins in the diet; the toxic effect of some such substance as aluminum, occurring in certain vegetables; a deficiency of the diet in certain aminoacids.

New and Nonofficial Remedies.

Since publication of New and Nonofficial Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies."

Hepco Flour.—A flour prepared from the Soya bean. It is claimed that clinical trial has shown that the small percentage of carbohydrates in Hepco Flour is in the main not sugar-producing, and that it therefore is a suitable food material in cases in which carbohydrates are contraindicated, as in diabetes, amylaceous dyspepsia, etc. Hepco Flour is also sold in the form of biscuits as Hepco Dodgers and a granulated "breakfast food" as Hepco Grits. Waukesha Health Products Company, Waukesha, Wis. (Jour. A. M. A., Sept. 26, 1914, p. 1113.)

Propaganda for Reform.

Digalen Omitted from N. N. R.-In view of increased extravagance regarding the claims made for Digalen by the Hoffmann-LaRoche Chemical Works the Council on Pharmacy and Chemistry decided to investigate the present eligibility of Digalen. Examinations demonstrated that the asserted presence in Digalen of "amorphous digitoxin" was not substantiated by evidence, that Digalen and Digalen Tablets were not constant in composition and action and that the claim that Digalen causes less gastric disturbances than digitoxin was unfounded. While the manufacturer promised to hold the claim that Digalen contained "amorphous digitoxin" in abeyance, they refused to concede the variable composition of Digalen and reasserted that Digalen was less liable to cause gastric irritation than other digitalis preparations. In view of the overwhelming evidence that Digalen is variable in action and in composition and that it produces the same gastric disturbances as other digitalis preparations, the Council voted that Digalen and Digalen Tablets be omitted from N. N. R. (Jour. A. M. A., Sept. 5, 1914, p. 881.)

Dose of Diphtheria Antitoxin.—While 3,000 units, the dose given in the Pharmacopoeia, probably is a sufficient initial dose in many cases, this quantity is not

enough to satisfy the factor of safety. There is a growing opinion that no case of diphtheria should receive less than 10,000 units as the initial dose. (Jour. A. M. A., Sept. 5, 1914, p. 873.)

Vaccination against Smallpox and Typhoid.—In view of the war, a general revaccination of the population of Paris has been ordered and huge quantities of antityphoid serum have been prepared. (Jour. A. M. A., Sept. 5, 1914, p. 873:)

Angier's Emulsion .- A report of the Council on Pharmacy and Chemistry points out that when Angier's Emulsion, Angier Chemical Co., Boston, Mass., was first put on the market it was advertised as a "food-medicine" and an "Ideal Substitute for Cod Liver Oil." Although the manufacturers now advertise this product as a laxative and state it to be "purely mechanical in its action," they still mingle with the new ones the old claims of "tonic and reconstructive merits" and thus attempt to perpetuate the erroneous belief that the preparation has nutritive value. As to the identity of the petroleum product contained in the preparation, regarding which the advertising circulars make contradictory statements, the A. M. A. Chemical Laboratory reports that this has all the properties of soft yellow petrolatum. (Jour. A. M. A., Sept. 12, 1914, p. 962.)

Liquid Soap.—The following economical formula has been proposed. It may be flavored and colored to suit: Sodium hydroxid 55 gm., potassium hydroxid 65 gm., cottonseed oil 800 c.c., alcohol 500 c.c., and water to make 5,000 c.c. (Jour. A. M. A., Sept. 26, 1914, p. 1129.)

Antiseptic Action of Hexamethylenamin.

—The former opinion that hexamethylenamin possesses antiseptic action independently of the liberation of formaldehyd, was an assumption not founded on reliable experimental evidence. The recent in-

vestigations of Burham, Hanzlik and others have shown that its action as an antiseptic depends on the decomposition into formaldehyd and ammonia which occurs only in an acid medium. (Jour. A. M. A., Sept. 12, 1914, p. 962.)

Vaccine Virus not Contaminated .-- A study of cases shows that vaccinal tetanus is not due to contaminated vaccine virus. Further, since the law regulating the sale of biologic products in 1902 went into effect, there have been examined in the Hygienic Laboratory of the U.S. Publie Health Service over 1,500,000 doses of vaccine virus without a single specimen having been found to contain tetanus spores. Also, experiments indicate that tetanus will not be produced even if the virus used contains tetanus spores. Most cases of vaccinal tetanus are due to infection after vaccination. (Jour. A. M. A., Sept. 19, 1914, p. 1032.)

Sodium versus Potassium Salts.-The probable shortage of potassium salts due to the war suggests that sodium salts may in most cses be substituted without disadvantage. In general potassium salts have no marked superiority over the corresponding sodium salts. While the potassium compounds are said to be more active and to possess a more diuretic effect, the sodium salts are less depressing to the heart and in some instances less disagreeable to the taste. Sodium iodide, sodium bromide, sodium acetate, sodium citrate, etc., are just as effective as the corresponding potassium salts. (Jour. A. M. A., Sept. 19, 1914, p. 1034.)

Sanatogen.—Testimonials for Sanatogen are published which show good results in cerebral concussion, alcoholic gastritis, anemia, etc. The patient is given a chance to recover by rest, a proper diet and Santogen—and the recovery is attributed to Sanatogen. Based on some biologic ex-

periments the exploiters of Sanatogen assert that "Sanatogen acts as a strong stimulus as far as the recuperative powers of the blood are concerned." These experiments are repeated by Professor A. J. Carlson of the University of Chicago, using Sanatogen, casein, casein and glycerophosphates, milk and crackers and milk. Prof. Carlson's experiments show that the effects produced by Sanatogen are not different from those obtained when casein, casein and glycerophosphates, milk and crackers and milk are used. (Jour. A. M. A., Sept. 26, 1914, p. 1127.)

Value of Talcum Powders .- The action of talcum powders on the skin depends on their protecting and dehydrating properties. On the other hand they tend to form crusts and pastes, due to mixture of the powder with sweat or other secretions. There is doubt if the boric acid in talcum powders can exert any antiseptic action. The action of the salicylated talcum powder of the National Formulary, though contain 10 per cent of boric acid. depends on its salicylic acid. Commercial talcum powders contain small amounts of various antiseptics and perfuming agents and have little value from a therapeutic point of view. (Jour. A. M. A., Sept. 26, 1914, p. 1129.)

Angier's Throat Tablets.—These tablets are stated to be composed essentially of elm bark and petroleum and yet are claimed to "promote appetite and aid digestion." The A. M. A. Chemical Laboratory reports the tablets to contain about 12 per cent of soft yellow petrolatum, like that found in Angier's Emulsion. (Jour. A. M. A., Sept. 12, 1914, p. 964.)

Significance of the Word "Lutein".— The word "Lutein" has long been applied in physiologic chemistry to designate a group of fat-coloring matters which occur in nature and which have more recently

also been given the general designation of lipochromes. As a rule the use of the term has been restricted to the yellow coloring-matter which develops in the ovarian structures. It is unfortunate that lately various preparations of desiccated corporea lutea from animals are being sold as lutein. (Jour. A. M. A., Sept. 29, 1914, p. 1119.)

Book Reviews

A NOTABLE WORK ON BIOLOGICAL THERAPEUTICS.

A book of uncommon interest and value to physicians has just been issued from the press of Parke, Davis & Co. It is a new book "Manual of Biological Therapeutics," receipt of a copy of which is hereby acknowledged by the editor of this journal. The book is handcomely printed in large, clear type, on heavy enameled paper, and bound in cloth. It contains 174 pages of text, upwards of thirty full-page plates in color, and a number of half-tone illustrations in black and white, together with a comprehensive index. As its title suggests, it is a concise and practical treatise on biological therapeutics, and so replete with useful information that no practitioner should miss the opportunity to secure a copy, especially in view of the fact that the publishers announce that the entire edition is to be distributed gratuitously to members of the medical profession. To our physician friends we suggest the propriety of writing at once for a copy of this "Manual of Biological Therapeutics," addressing the request to Parke, Davis & Co. at their home office in Detroit, Michigan. It will not be amiss to mention this journal in writing.

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A. G. SHORTLE. M. D., Associate Physicians.

M. W. AKERS, Superintendent.

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PAVOR THOSE WHO FAVOR US

THE STUDY OF LOCAL POISON-OUS AND MEDICINAL PLANTS.

The present European war, outside of its political and sociological effects, has had a profound influence upon all lines of work in this country, in spite' of the distance which separates us. Our profession feels it in many ways, among others in the drug supply. Some of the most reliable firms manufacturing drugs and chemicals are in Germany, and this supply is, of course, shut off. The interference with the importation of iodine and potassium alone should be felt before long. This is true not only of synthetical drugs and chemicals, but also of botanical products, there being extensive gardens for raising them abroad. This suggests to us that we do not know enough of our own source of supply, referring particularly to our medicinal plants. There are some plants in our country that are very little known medically, and about which something of value may be learned upon investigation. There are some in our southwest

that have probably never been studied medically.

The writer was told some years ago while resident in Tucson that some tubercular patients collected the sap of the mesquite and took it as remedy; good results were claimed. The cures resulting were probably due to the open air and climate, rather than to the mesquite juice, but there may be something in it. It is interesting to note and valuable to know in case of necessity that the mesquite beans are very nourishing and can support life.

It has been known for years by southern physicians that *chaparro amargoso*, which grows in Texas, is a valuable remedy in cases of amoebic dysentery, but there has been very little published about it. The last dispensatory refers to it under the name of *Castela Nicholsonii*, Hook, and says that its reputed antiseptic properties are probably due to the resinous principle, amargosin. It does not mention the name "chaparro," or its effect in dysentery.

A friend of the writer states that when he goes on the mesa (north of El Paso) he gets a papular itching eruption and believes that it is due to some poisonous plant, suspecting the greasewood. He has never tested it and, if true, it is an idiosyncrasy.

Some years ago a very interesting study of one of the southwestern plants was undertaken. It is familiarly known as the mescal button, Anhalonium Lewinii, or more properly, Lophophora Williamsii Lewinii. It is used at ceremonials by the Kiowa Indians and associated tribes, and a smaller variety of the plant is found among the Mescalero Apaches, they probably deriving their name from it. The traders of the Indian Territory called it mescal. but it is not the same as the mescal of Arizona, the Agave, from which the Mexicans make an intoxicating drink. The Mexican name used along the Rio Grande is peyote or pellote, from the old Aztec name peyotl. The principal symptoms caused by the drug are wonderful color visions, slowness of thought, sedative effect on the central nervous system and the peripheral nerves, lazziness, muscular depression, slow and full pulse, occasional nausea and vomiting, dilatation of the pupils, and wakefulness. The drug was not considered of practical value and has not been used.

There is a plant of this region that is of a great deal of value in the treatment of rattlesnake poisoning. The writer believes, although he has never seen it, that there is no fake about the snake dance of the Hopi Indians, During the ceremonial, after the Indians allow themselves to be bitten by the rattlers, they take a decoction of some native plant which seems to prevent poisoning and fatalities. After taking it they go to the edge of a cliff and vomit repeatedly. They guard the secret of the plant very closely and no white man has ever discovered what it is.

Very few cases of poisoning from

plants of this region are reported, although many occur. At the last meeting of the New Mexico Medical Society Dr. Laws, of Lincoln, reported a very interesting case of poisoning from eating wild parsley. Physicians who have cases of poisoning from plants growing in their neighborhood would find it both interesting and instructive to follow up such cases by experimental work upon guinea pigs. These little animals are not much trouble to keep and experiments are easily carried out. Various parts of the plants may be extracted with water, alcohol, etc., and the effects, when administered by stomach, hypodermically, and locally in the eye, noted.

We might mention here in connection with the medicinal plants of the southwest that the Navajos use plants and pollen at their religio-medical ceremonies. They have been familiar, probably for centuries, with the fact that plants propagate by means of pollen. The plants that are used by the Indians during these ceremonies are supposed to have a curative effect only through supernatural power, and not through any medicinal value. All, or nearly all, of their "sand" or "dry" paintings show representations of plants and pollen.

Any one interested in this subject will be well repaid by consulting the following references:

REFERENCES.

Mescal; A New Artificial Paradise. Havelock Ellis. Contemporary Review, January, 1898.

Mescal Buttons. (Anhalonium Lewinii). D. W. Prentiss and F. P. Morgan. Therapeutic Gazette, Jan., 1896.

The Mescal Plant and Ceremony. James Mooney. Ibid.

Mescal Buttons. D. W. Prentiss and F. P. Morgan. Medical Record, Aug. 22, 1896.

Anhalonium Lewinii. (Mescal Buttons). D. W. Prentiss and F. P. Morgan. Therapeutic Gazette, Sept. 16, 1895.

Contributions from the U. S. National Herbarium. Vol. III, No. 2, June 10, 1894. U. S. Dept. Agriculture, Div. Botany. John M. Coulter. "Preliminary Revision of the North American Species of Cactus, Anhalonium, and Lophophora."

The Night Chant, a Navajo Ceremony. Washington Matthews. Memoirs of the American Museum of Natural History. Vol. VI. May, 1902.

U. S. CHAMBER OF COMMERCE TO STUDY FOOD AND DRUG QUESTIONS.

The Chamber of Commerce of the United States of America, a body composed of representatives from about 600 local boards of trade, chambers of commerce, and trade associations, widely distributed throughout the United States, has taken up the study of the subject of uniform food and drug regulation. For this purpose a special committee was appointed in July, and its first meeting was held at the headquarters of the Chamber in Washington, October 8th. The committee is composed of Willoughby M. McCormick of Baltimore, A. J. Porter of Niagara Falls, John A. Green of Cleveland, B. L. Murray of New York, and Theodore F. Whitmarsh of New York. Mr. McCormick, the chairman, is a member of the Board of Directors of the Chamber of Commerce of the United States and the

head of the firm of McCormick & Co., manufacturers of extracts and drugs and importers of spices and teas; Mr. Porter is president of the Shredded Wheat Co.; Mr. Green is secretary of the National Association of Retail Grocers; Mr. Murray is chemist to Merck & Co., and Mr. Whitmarsh is vice-president of Francis H. Leggett & Co.

The first meeting of the committee was devoted to organization and the preparation of a program for the committee's future work. The following resolution was adopted:

"Resolved, That the Chairman be and he hereby is authorized and empowered to appoint two sub-committees to consider, respectively, the problems relating more particularly to food control and to drug control, and to report their findings to the general committee.

As a result of the above resolution Mr. McCormick appointed Mr. Murray as chairman of the sub-committee on drug control and Mr. Porter as chairman of the sub-committee on food control

The following resolution commending the efforts of the Department of Agriculture tending towards cooperation and uniformity was also adopted:

"Resolved, That this committee hereby earnestly and heartily endorses the establishment of the bureau in the United States Department of Agriculture, particularly concerned with Federal and State cooperation in the enforcement of the Food and Drug Control laws, thereby promoting an equal and uniform enforcement of such laws, believing that this work is distinctly in the public interest."

The position taken by the committee

on the meaning of uniformity is interesting and will repay close examination. Its views are not confined to a limited horizon, but are intended to grasp the broader and wider fields. Its efforts will be confined to no organization or class of people. It hopes to cover in tis endeavors the position of the wholesaler, the retailer, the consumer, the manufacturer, the official, and all others concerned in the production, handling and consumption of food and drugs. But only the broad, general questions of national character will be considered. After a lengthy discussion the committee at its meeting, by unanimous vote of al present, adopted the following regarding uniformity:

· "Uniformity as the committee would define it involves the highest degree of efficiency in food and drug control which it is possible to have prevail universally and equally in every part of the nation. The Federal, State and Municipal laws and their regulations would, if perfect uniformity were attainable, reach the level of full and complete efficiency,-and thereby afford equal protection and a uniform standard of living for al the people. Uniformity accomplished places merit and the general public interest over local political or geographical divisions. This committee will, therefore, direct its efforts toward the acomplishment of uniformity. The committee cannot but feel impressed with the magnitude, the importance, and the seriousness of its work. It cannot but feel the need for the closest study of the subject. And again the committee cannot but feel the necessity for the fullest and most cordial cooperation between itself and the officials and all others concerned. The committee will, of necessity, act deliberately and slowly, making certain of each step, considering only the important problems of national character.

The Travel Study Club of American Physicians, which made a successful Study Tour of Europe last year, has completed the plans for its 1915 Study Tour to the A. M. A. meeting in San Francisco, Honolulu, Japan, the Philippines, China, with optional return via Siberia and Europe (war permitting) or via Canada. This being the first party of American physicians ever visiting the Far East and the new possessions of the United States, a most cordial welcome can be expected by authorities and members of the medical profession. The Travel Study Club would like to make its enterprise as representative as possible and asks all those interested to communicate with the Secretary, Dr. Richard Kovacs, 236 East 69th Street, New York.

The modern diagnosis and treatment of disease cannot, at the present time, be made without the aid of the clinical laboratory and we wish to call the attention of the reader of this Journal to the National Pathological Laboratory whose advertisement we carry and whose reliability and ethics are dependable. The physician may send to this laboratory any kind of specimen for diagnosis, and the result will help both the physician and his patient. Many physicians are not acacquainted with laboratory technique and by becoming acquainted with a clinical laboratory, with such high standing as this one, will often times derive more benefit than if they would take a post-graduate course.

Original Articles

INTUSSUSCEPTION IN CHILDREN.

By James Vance, M. D. El Paso, Texas.

(Read before the 33d annual meeting of the New Mexico Medical Society, Albuquerque, N. M., Oct. 5, 6 and 7, 1914.)

Intussusception in children is not a yery rare condition, and though it occurs most frequently in infants, it is just rare enough to cause trouble. it were more common, the condition would be readily diagnosed. The average practitioner will not see more than one or two cases in a life time, and unless he is a very careful observer; the diagnosis will escape him and the child will die. There are unquestionably a large number of intussusception cases in children who die annually from failure to recognize the condition; still when these few hundred cases are distributed among a hundred thousand or more physicians, the number after all is small. Yet, nearly all these children could be saved were the condition kept fresh in the mind of the profession so that the diagnosis would be made early.

We report seven cases, of which the first three are our own:

Case I. Boy, twelve months old, was first noticeably sick on Monday, Sept. 4, 1911. He seemed to have abdominal pain and cramps, and so was given castor oil, which acted very unsatisfactorily. The pain was paroxysmal, severe, apparently general, and not always associated with a stool. In the paroxysms, he would at times draw

up his limbs; at others, extend the entire body. He had frequent bowel movements on the following day, mostly mucous, but containing fecal matter. Later in the day the mucous began to be blood-streaked. On Wednesday, Dr. Sexton was called and found the child prostrated, with a tense abdominal wall which rendered palpation difficult. The temperature was 99 and pulse only a little above normal. The child had a diarrhoea of bloody mucous stools. The stools were foul smelling and contained undigested food.

A calomel purge was administered which was effective. This was followed by bismuth and opium. The child did not improve.

On Sept. 12th, eight days after the initial symptoms, a tumor was felt in the region of the sigmoid flexure, firm, immovable, and only slightly tender. Firm pressure on the tumor, however, caused cramps in the abdomen. On account of the tumor and the bad condition of the patient, he was sent to us.

During the six days that the child was under Dr. Sexton's care, the temperature varied from normal to 100 2-5 F., and pulse generally just a little above normal, but good. All during this time the child would take liquid food at times. Vomiting was also of daily occurrence but often many hours of respite between times.

When we saw the child at the hospital, he was prostrated, abdomen distended, septic looking, pulse 130 and temperature 103 deg. F. rectal. The palpable tumor was not sausage-shaped, but somewhat round to feel and located in the region of the upper sigmoid colon.

We did not make a diagnosis since we had never seen a case of intussusception before, and the abdomen was so distended only the rounded head of the intussusception could be felt.

The child's condition was extreme, so the abdomen was at once opened and a large quantity of bloody serum escaped. The tumor was seen to be within the descending colon just above the sigmoid. On account of the distension of the intestines, exploration was difficult, and it was some little time before the true nature of the condition was discovered. The tumor was caused by a telescoping of the intussusception on itself and was about 3 inches long and about the same thickness. The beginning of the intussusception was just to the right of the splenic flexure. The whole visible colon was semigangrenous and, as reduction could not be accomplished, the colon was clamped off at the sigmoid just below the head of the intussusception, and the entire colon was removed. brought out of the abdomen, opened and the whole intussusception drawn out which contained about two feet of ileum, the cecum, ascending and most of the transverse colon. All of this gut was gangrenous and, in consequence, removed. The child was so near dead that the proximal end of the ileum was sewed into the lower end of the abdominal wound and the abdomen closed.

In spite of every care the child never rallied after the operation and died eight hours afterward. Simply the establishment of a fecal fistula above the intussusception would have saved the child, had not the gangrenous bowel made peritonitis certain if left in the abdomen, so removal was done.

Case 2. Girl, ten months old, Dr. Sexton's own child, to whom we are indebted for this record. October 20, 1912, child had a good bowel movement and was otherwise well. While playing with her grandfather that evening, a slight indication of an abdominal cramp was observed by her father; there was a slight stooping forward for merely a second with drawn face and increased pallor, and immediately she was playful again. That night her father noted evidences of abdominal cramps but not enough to awaken her, but sufficient to make her restless and occasionally she gave a low cry in her sleep.

The morning of the 21st, she was up early as usual and had her morning feeding, and appeared rather as bright as usual, however, quite pallid. parents do not remember whether she had a stool that morning or not, but think not, since the child's mother gave her an enema. The enema caused unwonted uneasiness in the child and when on the commode she was fretful and cried somewhat. About 9 a. m. she became decidedly ill, Vomiting began, which became green after a time. Vomiting was paroxysmal and synchronous with the cramps. She was decidedly somnolent and would lie in a stupor until a paroxysm of pain would arouse her. After vomiting she would again become quiet. At noon she was apparently much better, noticing things about her for the first time since 9 a. m., but before noon lapsed into somnolence again. Palpation of the abdomen noted some rigidity of the right rectus, but no tumor could be detected. Palpations over the area of resistance produced paroxysms of pain and vomiting. Her father was greatly worried

and at 3 p. m. when some blood was found on her diaper, he diagnosed a probable intussusception, which was concurred in by Dr. McBride. A few hours later the child was brought to us for observation.

We saw the baby at 8:30 p. m. She was then free from pain and lay perfectly still. No blood nor bloody mucus had been passed by the bowel since the single instance at 3 p. m. The child did not seem sick. The pulse was good and about normal. Temperature was 99 deg. F Palpation of the abdomen showed the wall rather tense all over, but by careful gentle palpation, so as not to cause a spasm of the muscles, a typical sausage shaped tumor was felt just below the liver beginning immediately to the right of the mid-abdominal line and extending to the left along the line of the transverse colon.

The baby was sent to the hospital at once, and in preparation for operation the lower bowel was irrigated, from which came bloody mucus and very little fecal matter. At 9:30 p. m. the baby was given ether and when anaesthetized the tumor was easily felt and outlined. The abdomen was opened through the right rectus as though for gall-bladder appendix operation. There was already a little serum in the abdomen. The intussusception presented at once; the left extremity was well over to the splenic flexure of the colon. The head of the intussusceptum was gradually and gently squeezed to the right, while the right end was gently unfolded. Reduction was in this way quite easily accomplished. In this case the intussusception had produced symptoms for only about 12 1-2 hours; still the greatest care had to be exercised in reduction not to tear the bowel which

was already quite friable. Here the condition was taken early and yet the tightness with which the intussusception was jammed into the bowel below was astonishing.

The invaginated portion of the bowel included about 12 inches of the ileum, the cecum, the ascending colon, the hepatic flexure and the transverse colon, nearly to the median line. The intussuscepted bowel was dark from circulation stasis but not gangrenous. The appendix was so black that we removed it for fear of gangrene. The cecum was sewed to the peritoneum in its fossa and the mesentery of the ileum shortened by taking a fold in it parallel with the gut. This was secured with Lembert catgut sutures, catching the peritoneal coat only to prevent interfering with the blood supply. The abdomen was then closed and the child put to bed.

Recovery was easy, the bowels moving normally on the following day. Breast feeding was begun 36 hours after the operation and well borne. Sutures were removed on the eighth day and the wound was perfect. The baby was no trouble whatever and more easily nursed than the average grown person.

Showing how tractable the baby was:—On the eighth day the perforated adhesive binder that held the dressings was pulled off in the usual way, about which adults generally object vigorously, and the baby did not even cry.

The baby has remained well since, now two years, and is normal in every way.

Case III. Boy, age eleven months, whose parents gave the following history: Shortly after the birth

of the child a swelling had been noticed in the right inguinal region. Little attention was given it till, the child was about six months old when at times the tumor would be noticeably enlarged. A physician then diagnosed an inguinal hernia, but nothing was done for it.

At about ten months of age, the tumor had become considerably larger and could no longer be reduced by the mother as before. The child was perfectly well otherwise, so conditions continued thus for another month. The child then not seeming well was given castor oil. This was on the morning of Dec. 15, 1913. Later in the day the oil was repeated, because the first dose had not acted and the child was fretful and colicky. During the afternoon the bowels moved several times but accompanied by colicky pains which grew worse and the baby began to vomit. The parents grew alarmed and brought the baby to us for examination.

Examination showed a well developed and well nourished child, eleven morths old. Temperature was normal and pulse a little fast, but good. Palpation of the tumor in right inguinal region showed it to be about the size of a small orange, tense and tender, and extending into the scrotum. A diagnosis of incarcerated hernia was made, with possibly partial obstruction of the bowel. The child was in fair condition, and it was deemed safe to send the child into the hospital for preparation and operate the next morning. The child had taken no food during the day and none was given at the hospital, but the child vomited twice during the night. Bowels also moved several times with some mucus but no blood in stools.

The following morning the child was anaesthetized with ether and the hernial sack opened. A quantity of serum escaped and about two feet of ileum was in the sack which extended into the scrotum. The distal extremity of the incarcerated bowel was adherent to the ring and three inches of the ileum above was invaginated into the bowel below causing the typical sausage-like tumor of intussusception.

The involved bowel was very little inflamed and the intussusception easily reduced. Nothing could be felt within the bowel, so it was returned to the abdomen. The sack was dissected out and the hernia operation completed.

The child made an easy recovery and went home at the end of a week, and has remained well since.

This case is of more than passing interest because of two facts: first, the intussusception occurred within a hernial sack; and, second, it was probably produced by the castor oil. From the history and condition of the involved bowel, the invagination was not of many hours standing.

There were no bloody stools in this case, as would be expected in a case of so short duration.

With the view of determining the local occurrence of this calamity, we have collected all the cases beside out own that have been recognized during the past five years. The fourth and fifth cases are reported by us from what the attending doctor remembered of the case. Cases six, seven and eight were cases in the experience and Brown and Brown, whose written notes on the cases are here published verbatim:

Case IV. Dr. Richmond reports the case of a well, vigorous child of thirteen months, who was suddenly

seized with abdominal cramps at about midnight. The following morning the child was passing bloody mucus by bowel and an abdominal tumor was found below the liver. A diagnosis of intussusception was made and the child sent to the hospital. In consultation, a disagreement as to diagnosis (because the child seemed to be doing so well) caused a delay of twenty-four hours. At this time the child's condition became alarming and the abdomen was opened. An intussusception of the ileo-colic type yas found and because it could not be reduced, resection was done. The child promptly died.

Case V. Dr. Wright reports the case of an infant, six weeks old, who was sent in to him from ninety miles in the country. A diagnosis was made as soon as the child was seen, from the history of blood by rectum, preceded by cramps and vomiting, and the finding of a tumor in the sigmoid region. The child was in profound shock and a generally bad condition. The abdomen was opened and an ileo-colic intussusception reduced. The child only lived a few hours.

Case VI. Master Holton, age 9 1-2, began vomiting at 2:00 a. m. with signs of great pain in abdomen. Cathartic ordered, good result at 4:30, reported by mother to be no blood in stool. Vomiting continued, pain continued; there was no distension. Child seen again at 7:00 a. m. Abdominal examination was negative other than rigidity and contraction. Tentative diagnosis of intussusception was made, but the child at that time was in extremis and died of shock a half hour later.

This attack followed the ingestion of nuts and fruit eaten late the evening

before, and death followed within five hours of beginning of symptoms, without straining or passage of blood. Post mortem showed generally negative, except four intussusceptions in the jejunum and ileum; these varied from three or four inches to eight or ten inches. There was no tumor of the bowel found to have caused the intussusceptions and death probably occurred from shock because of multiple invaginations.

Case VII. Master Ransburger, age 7, took sick during the forenoon and was visited at 11:00 a. m., at which time he was having persistent vomiting, frequent bloody passages, contracted abdomen and sausage mass in the right iliac fossa. This was so typical that diagnosis was made immediately, operated at 2:00 that afternoon. Invagination was only four or five inches long, and could be readily reduced by manipulation. The invagination was relieved, the small intestine was anchored at two points of the mesentery to prevent its reinvagination. It was discovered at this time that there was a small tumor mass inside of the bowel, but the child was not in good condition and circumstances were not favorable for resection or reopening of the bowel, consequently the temporary relief of suture as stated before was done. Two months later the child was taken sick with the same set of symptoms, was operated on immediately, and the invagination relieved, the tumor resected from the bowel wall by a vertical incision, which was closed up transversely, not narrowing the caliber of the intestine to any appreciable degree. Tumor was found to be muco cyst the size of a small hickory nut. Uninterrupted recovery with no further symptoms.

Case VIII. Master Caruthers. age 2, took sick in the night with pain in the bowels, vomiting and frequent stools. The following day, claimed by the parents that child was better, and no doctor was called, as they were Christian Scientists and deluded themselves into believing that the child was better. During the following night they claimed the child had some pain but they thought not sufficient to be alarming, though the diarrhoea and strain persisted, and the child continued to vomit. Doctor was called the following day at 4 o'clock after child had been sick about forty hours, at which time it was dying.

Post mortem showed the ileum to be invaginated into the colon and ready to present at the rectum. The bowels were slightly distended and the mass could be readily felt. This patient would have had every opportunity to have surgical relief, had a surgeon been called in during the earlier part of the sickness.

CAUSES and PATHOLOGY.

In about 90 per cent of cases, intussusception begins at the ileo-cecal region, due to the anatomic relations of the ileum and cecum. The ileum being small is readily telescoped into the cecum. Associated with this normal anatomic relation is abnormal mobility of the cecum and adjacent ileum, due to a long mesentery of those parts. There is also probably an incomptency of the ileo-cecal valve which allows the ileum to slide easily into the cecum.

Intussusception occurs next in order of frequency in the ileum alone and least frequently in the colon alone.

From the reduction of our two ileo-

colic intussusception and a study of reported cases, the mechanism seems to be, first, the invagination of the ileum into the cecum, and then, as the head of the intussusceptum advances, more and more ileum is invaginated till its mesentery will let it go no farther, then the cecum and ascending colon invaginate as far as their mesentery will allow. Thus we see the intussuscipiens is composed of the invaginated portion of the ileum, the cecum, and that part of the colon which the length of its mesentery permits to invaginate. This intussuscipiens then acts as a canula on which the bowel beyond is threaded and shoved back tight like a closed occordion. It would not be possible for the head of the intussusceptum to penetrate the colon so far were it not that the course of the colon is like the rim of a wheel, and the mesentery of the intussusceptum is like the spoke, the hub of which is the root of the mesentery. Thus when all the gut is invaginated that can be, the intussusceptum revolved about its hub threading the colon beyond onto it. When this process can go no further, more progress of the intussusceptum head can be made by the intussusception telescoping on itself, thus making the intussusception composed of five thicknesses of bowel instead of three as in the ordinary or simple intussusception. The five thickness intussusception is known as a double intussusceptionsuch as we had in our first case.

This mechanism is borne out by Flint's case in which the head of the intussusception was the ileum only twenty inches above the ileo-cecal valve and yet projected 3 1-4 inches from the anus. In the two cases we report, the head of the intussusceptum was only

about twelve and six inches respectively above the ileo-cecal valve.

To one who has not seen the actual involvement of a large part of the gut mentioned, it would seem impossible, but we find in the American literature still another case in which the intussusceptum protruded from the rectum eight inches. The case was not operated, so further details are not known.

Ascarides, small polypi within the bowel, and Meckel's diverticulum and enlarged mesenteric glands, have all been found to be causes of intussusception. The above are none commonly found in children over two years of age, rarely under that age. Children under two years of age are subject to all kinds of diarrhoea which are a prolific cause of intussusception, due to the excessive peristalsis produced. Castor oil carelessly given may produce intussusception in the same way. Numerous histories castor oil as the causative factor, so it is wise to be careful in the use of castor oil in the lienteric diarrhoeas.

crowded into the intussuscipiens sufcrowded into the intussuscipem sufficiently tight, the mesenteric venous return is shut off. The venous stasis so produced causes an exudate of blood into the intestine which, mixed with the copious amount of mucus excreted, causes the characteristic bloody stools

Matteng reports a case in a female, aged three years, who had an ileo-colic intussusception and an addition intussusception of the ileum. This latter intussusception was more recent than the former because it was easily reduced while the former was irreducible.

Brown's case of four separate intussusceptions, is the greatest number we have been able to find. The case is further remarkable because all the intussusceptions occurred in the small bowel, some of which were in the jejunum, the only case of jejunal intussusception we have found.

Koch and Oerium, in reporting 400 Danish cases, found 5 per cent under one year of age. Nearly two-thirds of these cases occurred between the fifth and seventh month of life, at the time when artificial food is introduced and the child is most liable to all kinds of intestinal troubles. This series also showed more cases occurring during the fifth and sixth month of life than during the entire second year. Walton, in reporting 239 cases, found 173, or 72.4 per cent under one year of age. Many series can be found showing from 55 per cent to 75 per cent under one year of life, so it would seem safe to say that over 60 per cent of all cases in children occur under one year of age.

DIAGNOSIS.

There are five cardinal symptoms upon which the diagnosis can be easily made. The symptoms in the order of their occurrence are: (1) Abdominal colic, severe in character and usually of sudden onset, but occasionally not severe in character at first and of gradual onset; (2) Vomiting, which cannot be controlled; (3) Prostration of child; (4) Bloody mucus stools or blood from the rectum; and (5) a sausage shaped tumor within the abdomen.

Kellock (8) says intussusception would appear to be an affection of the well nourished and thriving infants, rather than of the unhealthy or delicate ones. This would seem the case because a study of most cases shows a child previously well suddenly taken with ab-

dominal cramps. This initial colic Clubbs (9) describes in this masterly way:

"The scream followed by the pallor, sometimes described as 'fainting' or 'stiffening out,' then the subsequent vomiting and straining; fits of crying from time to time, intervals when the child seemed all right."

Though this initial attack is the classical onset, there will be a number of cases which have had an intestinal disturbance of some sort from a few hours to several weeks' duration before the onset of intussusception. The most common symptoms of all digestive disorders in children are colic and vomiting, so that in these cases the onset colic of intussusception is apt to be so masked that it may appear to be gradual; the colic growing worse and worse till the straining and excessive nausea attract especial attention.

Numerous histories would also indicate that the beginning of the intussusception is not necessarily attended by the classical colic, even when the child was well before the onset. Our second case belongs to this group. This child had no classical colic, but a gradual insiduous onset. Further, many cases at operation seem to show the intussusception of longer duration than the apparent onset of symptoms would indicate. So it is difficult to tell whether the beginning of intussusception is always coincident with first severe symptoms.

Vomiting cannot be controlled, but it is by no means incessant. There may be intervals of several hours that the child will not vomit, if nothing in the way of medicines or food are given, it. If medicines or foods are given, they are generally promptly vomited; how-

ever, they may be retained for several hours, and fair bowel movements may result from purgatives, for it must be borne in mind that intussusception does not completely obstruct the bowel till the strangulation of the mesenteric vessels causes such swelling and oedema as to completely block the invaginated bowel. Even in complete obstruction of the bowel, there may be intervals of several hours without vomiting, especially if no foods or medicines are given.

Prostration may be absent but generally rapidly follows the vomiting. The child lies perfectly still when free from pain. The child is somnolent and pays little or no attention to things about it. At intervals the child appears to brighten up and notices things about it, and for a time may appear all right, but later the somnolence returns with other symptoms.

From six to twelve hours after the beginning of severe colic and vomiting there will appear bloody mucous stools which may number ten or fifteen a day and resemble an ileo-colitis. In ileo-colitis the blood and mucous is mixed with bile and fecal matter. Flatus is also expelled. In intussusception, after the first few moments, which remove the fecal matter from the bowel below the intussusception, there is little or no fecal matter and no gas is expelled by rectum. Often blood comes from the rectum instead of the bloody mucus.

Very occasionally there is no blood or bloody mucus passed by bowel. This in 70 cases Eccles (9) found the above sypmtom absent in three cases and not noted in six cases.

The tumor is always present before the appearance of the blood or bloody mucus by rectum, but it can seldom be

found before that time, because at the beginning of intusssuception the tumor is soft and difficult to feel. It can be felt later on because the increased amount of bowel involved with the concomitant swelling makes the tumor both larger and harder. By this time the tumor has swung around from its starting point at the ileo-cecal valve to the upper left hand quadrant of the abodomen. This explains why the tumor is so seldom felt at the ileo-cecal valve in infants. In children over two years old the tumor is often felt in the cecal region because after this age the cecum and colon are not so mobile as in infants. For this reason the cecum is not dragged out of place to any great extent; consequently the tumor remains in the cecal region, and so may be diagnosed appendicitis, as in Wright & Morrison's (10) case.

Intussusception is much more rapid in some cases than in others, so the tumor may be found anywhere within the abdomen. Statistics at this time show that the tumor is most frequently found in the sigmoid colon and next most frequently within the rectum. After this, in the upper left hand quadrant of the abdomen, and least frequently of all at the ileo-cecal region—the point at which 90 per cent start.

In the majority of cases the finding of the tumor within the rectum or sigmoid means a badly mismanaged case. The diagnosis should be made before the tumor gets that far. That there may be exceptions to this rule seems evident by Taft's (11) case in which the intussusception protruded eight inches from the anus two hours after the apparent onset of the disease.

Digital examination by rectum should be made in every case in which

the tumor can not be located, because the tumor is found within the rectum in about 20 per cent of all cases and can be felt through the rectum in 50 per cent or more of all cases by bimanual examination.

Even when intussusception is strongly suspected, the tumor may not be found by palpation. Thus LeWald (12) reports a sixteen months old child in whom the tumor could not be found although the child had been examined under an anaesthetic. The child had quite clearly an intussusception so the child was given 75 grains of bismuth in 250 c. c. of suspension medium. Inside of thirteen minutes a skiagram had been made and the exact location of the intussusception shown, which, strange to say, was at the ileo-cecal valve. The child was operated upon at once; the intussusception found as shown by the X-ray reduced, and the child recovered. LeWald said this was the second case of this kind that he had seen diagnosed by the X-ray. He thought the procedure safe and advisable. Lyle-in discussion-was not so sure of the advisability of this method, because fatalities had been recorded by so doing.

The sausage shaped tumor had been too much emphasized. The presence of a tumor within the abdomen is often all that can be determined and does not feel sausage shaped in a large per cent of all cases.

To summarize: Intussusception presents a definite clinical picture—more definite than any other form of intestinal obstruction. This picture is varied, of course, when the accident of intussusception occurs during the course of some other disease. This is especially the case when accompanying

ileo-colitis, and the various lienteric diarrhoea to which young children are especially liable.

The picture is of a child preciously well, seized with abdominal cramps, paroxysmal, and severe in character. There is vomiting and more or less collapse and stupor. This is the storm which is followed by a calm, during which time the child seems all right. Later the cramps return and are intermittent and paroxysmal in character. but are not accompanied by the collapse or shock of the onset. Between these paroxysms the child seems well or very little sick. Six to twelve hours later bloody mucus or blood is passed by rectum. Examination reveals a tumor, generally in the upper left hand quadrant of the abdomen. This will not be later than seventeen hours after the onset, and the finding of the tumor makes the diagnosis practically certain.

If this picture is presented and the tumor can not be found, examination should be made under ether when the tumor will nearly always be found and the operation can be done at once.

It may be worthy of note that O'Neil (13), reports a child of fifteen months who had swallowed a "china pig." This being unknown to anyone, the symptoms produced were nearly identical with intussusception—severe colic, vomiting and muco-hemorrhagic stools. While the parents were making up their minds to an operation, the "pig" was passed by rectum. Sexton (14) tells me of a similar case in which a foreign body was removed from the sigmoid by operation.

Intussusception cases not complicated by some kind of bowel disturbance, have no temperature, or about 99 deg. F., and a good pulse, for nearly

forty-eight hours. Cases complicated by intestinal disturbances, especially ileo-colitis, may have high temperature and a fast pulse. Such a case is that of O'Neil in which the temperature was 103 deg. and pulse 160 at time of examination.

TREATMENT.

Reduction of the intussusception may often be accomplished by the introduction of air or water into the colon per rectum. Smith (15) reports a case in a child of eleven months in which an ileo-colic intussusception was reduced by abdominal section. The child recovered but several months later had a recurrence. The tumor was in the ileocecal region. Morphine gr. 1-60 was given hypodermically, and ten minutes allowed to elapse, when the child was lifted by the feet and gentle massage from the umbilieus to the ileo-cecal region was employed. The tumor disappeared and the child dropped into a quiet sleep. The bowels moved nameally the following day.

Overlock (16) reports a case in which the intussusception was relieved by pumping air into the rectum with a bicycle pump. Taft reports a case in a child of two years which was suddenly seized with severe paroxysmal pain within the abdomen and vomiting. Two hours later examination showed eight inches of intussusceptum protruding from the rectum. The child was in a state of collapse. After considerable effort the intussusceptum was replaced into the rectum. Then by inverting the child and running less than one quart of warm saline into the rectum, supplemented by careful manipulation of the abdomen, the child was relieved.

Koch and Oerum (6) in reporting 400 Danish cases, prefer hydrostatic

pressure for the reduction of intussusceptions in children under one year of age. Over one year of age they prefer laparotomy. They give as a reason for this that children under one year do not stand operations so well. They state reduction is accomplished under deep anaesthesia by-means of taxis and large quantities of water per rectum.

These cases are recited and Koch and Oerum's findings are here given so that any of us who have an intussusception case, which for any reason can not be gotten to a hospital and good surgical attention, can anaesthetize the child profoundly and attempt to reduce the intussusception by running warm saline into the rectum and at the same time assist by manipulation of the tumor through the abdominal wall. Air should not be used because it is more dangerous than water, because the amount of pressure can not be so easily regulated. Obviously, taxis, unassisted by other methods, will seldom succeed.

If good hospital facilities and a competent surgeon are to be had, reduction should always be made by abdominal section, because the so-called bloodless methods are open to such serious objections that they are to be employed only when laparotomy can not be properly done. These objections are: First, reduction often can not be accomplished; second, reduction is often incomplete and yet seems reduced; third, the bowel involved in the intussusception is so friable that rupture and peritonitis may occur; fourth, the causes of the intussusception are not removed, so recurrence is especially frequent.

Eve (17) reports eighteen cases in

which reduction could not be accomplished by injection. Fourteen of these eighteen cases were reduced by opening the abdomen afterward.

Moynihan (18) has employed injection while the abdomen is open, and watched the intussusception unfold, and found that frequently the first part (old part) of the intussusception did not reduce, and could not be made to do so. Though such a partial reduction would relieve the child temporarily, it is only a question of a short time till the condition returns and is reported as a recurrence, when, as a matter of fact, it never was completely reduced. Incomplete reduction by the bloodless methods is one of the main reasons why recurrences is so frequent after these methods. We find O'Neil reporting such a case in a female infant four months old. Child normal in every way till August 1, 1909, at which time undigested curds appeared in the stools with some mucus. Three days later infant became very restless, showing evidences of considerable pain. Twelve or fifteen hours later she passed a muco-hemorrhagic stool followed by more intense pain and continued bloody discharge from rectum. The infant presented a picture of great suffering, crying almost incessantly, legs flexed on abdomen, and had vomited once. Temperature 103 deg. F., P. 160, abdomen tense and slightly distended; palpations revealed no evidence of a tumor or excessive tenderness. Digital examination by fectum revealed a tumor. Operation was advised and patient removed to hospital. The parents opposed operation, so reduction by saline per rectum was attempted, and apparently successfully done, because the tumor disappeared, the child was

quickly relieved, and slept for a number of hours.

Eighteen hours later, all the symptoms returned. The abdomen was then opened and the tumor found in the left hypochondriac region. It was an ileocecal invagination with ileum, cecum, and appendix prolapsed into the colon. Reduction was comparatively easily accomplished. The appendix was removed on account of trauma. Two hours after operation the child had a convulsion and the temperature rose to 106 deg. F. Three other convulsions during the next four hours followed. Irrigation of the lower bowel obtained large brown stools and the convulsions ceased and the temperature went down. Infant was given the breast forty-eight hours after operation, but two days later an enterocolitis developed from which the child died on the fourteenth day after operation.

Had the eighteen hours not been lost on account of apparent success of hydrostatic treatment, this child would have probably been saved. The case is further reported because of the high temperature, which case records conclusively show is not present in these cases unless there is a more or less serious bowel disturbance accompanying the intussusception.

It takes a long series of cases to obtain statistics that will not be misleading. Turning to such statistics we find that Ladd (19) collected 216 cases treated by the bloodless method with 81 per cent failures. In 173 cases Clubbs (20) was able to reduce the intussusception in but 16 cases by the use of rectal injections. Lichtenstein (21) in a study of 557 cases placed the mortality at 73 per cent, and in infants under one year at 88 per cent.

Both American and English surgeons prefer the surgical method of opening the abdomen and reducing the intussusception by taxis, because the reduction, if possible, is certain to be complete, and if impossible, resection can be undertaken. Further, if there be an exciting cause, it can be removed. If the intussusception is due to castor oil or a diarrhoea, there will nearly always be found an abnormal mobility of the cecum and adjacent ileum. This can be corrected by anchoring the cecum in its fossa and the mesentery of the ileum shortened to prevent a return of the intussusception.

Every advantage is in favor of opening the abdomen except that the abdomen must be opened and reclosed; because reduction by water pressure should be done under anaesthesia.

Collins, (21, 22) by reference to the reports of hundreds of children operated on under six months of age, shows clearly that even very young children are good subjects for even serious operations.

Dowd (23) reports the case of an infant of five days old who had an irreducible colonic intussusception 37 hours after beginning of symptoms. The colon was resected from a point above the center of the transverse colon to the sigmoid. The ends of the severed gut were closed by purse-string suture, and side to side anastomosis of colonic end done by silk and cat gut suture. The infant recovered both in spite of being in so extreme a condition as to almost die on the table, and in spite of its tender age.

Dowd's case is the youngest case in which a successful resection has been done.

Flint (4) had a case in a child eleven

months old with a history of entero-coitis of about four months standing. Child was admitted to hospital on account of a bloody stool. On admission the child did not seem sick except for a pinched expression of the face. Rectal examination revealed the head of an intussusceptum within the rectum. Straining followed the examination and 8 c. m. of the intussusceptum was forced beyond the anus.

The abdomen was opened and almost the entire lower half of the small intestine, cecum, and the entire colon to the sigmoid, was invaginated into the sigmoid colon. Reduction was possible to the middle of the transverse colon. At this point the bowel became gangrenous and resection required. The gangrenous gut resected included three feet of ileum, the cecum, ascending and one-half of the transverse colon. The anastomosis of the ileum to the colon was an end-to-end Murphy button operation. The child recovered and had gained one pound over its original weight when discharged from the hospital six weeks after operation.

Anderson and Brooks (24) report an infant born at term after a normal but rather protracted labor. Examination showed an umbilical hernia through which an intestinal tumor was thrust. This tumor was' covered by peritoneum only.

Three hours after birth, without any anaesthetic, the peritoneum was opened over tumor, which was found to be the transverse colon, with six inches of the ileum invaginated into it through a hole "that would admit the end of the thumb"—we quote from the author—"To all appearances the transverse colon had been forced through the umbilical opening and was adherent at

this point. As the pressure from within was increased, the small intestines were forced up against the other gut and finally made way through."

The hole in the transverse colon was sewed up with catgut. In order to replace the intestines within the abdomen, the abdominal wall had to be opened for three inches below the umbilicus, and to cure the hernia, the umbilicus had to be cut away. The abdomen was then closed with through and through worm gut sutures. The child recoverad.

In a personal letter from Dr. Anderson, he states the rupture and invagination did not occur at birth, but at some time within the uterus. In explanation as to cause, he says the mother had reason to conceal the pregnancy and laced to such an extent that it would be incredible to believe had one not seen it.

This case is the youngest infant we have found reported, upon whom a serious abdominal operation was performed.

These cases are reported to show what remarkably good resistance infants may show to even the severest operations done under most unfavorable conditions.

In a search of the literature, Dowd found only seven cases under one year of age which recovered after resection of the bowel. Two of these seven cases are reported here for their own interest and the lesson they teach. Seven only have recovered out of all those attempted. All the rest have died, not because of the resection, but because of the gangrenous condition of the bowel that made resection necessary, and the consequent condition of the child.

If the diagnosis is made early, re-

section will never have to be done. The heavy mortality of operation is due to late diagnosis, and not to the operation itself. After 48 hours the mortality is from 60 per cent to 80 per cent. Before 24 hours the mortality is 10 percent. Intussusception of not more than 17 hours standing will give a mortality of not over 8 per cent.

Clubbs (20) in 150 treated cases lost 50 per cent in the first series of 50 cases; lost 24 per cent in the second 50 cases, and 8 per cent in the third series of 50 cases. The last 25 cases, diagnosed within 17 hours of onset and treated by abdominal section, all recovered.

From these facts the truth is evident—the diagnosis must be made early. The earlier the diagnosis, the more certain of success is the operation. The diagnosis should always be made within 24 hours, and if the picture of the condition is kept in mind, the diagnosis can nearly always be made within 17 hours of the onset, and often earlier.

Dr. Sexton (14) made the diagnosis, which was confirmed by Dr. McBride, in just six hours after the severe symptom onset in our second case. The baby had to be brought to El Paso by train, consequently the delay in operation.

Ether anaesthesia has been generally and safely employed. Personally, we prefer the incision through the right rectus muscle such as is employed for a combined gall-bladder and appendix operation. This gives good success to all portions of the abdomen. We like the tissue to tissue closure with cat gut suture. If the operation is hurried on account of the child's condition, through and through silk worm gut sutures give good results.

The cecum, if mobile, should be su-

tured in its fossa by a running cat gut suture or linen. The mesentery of the terminal ileum should be also shortened by sutures catching only the peritoneum, so placed that the mesentery is plicated on itself, only a little at first, but more and more, as may be necessary, approaching the ileo-cecal valve.

Recurrence after complete reduction is rare, but that it does occur is only too true and that it may recur more than once is well illustrated by the following remarkable case:

Kellock (8) reports a thriving, well nourished, breast fed boy, ten months old, who had a typical intussusception which was reduced by inflation with air. Four months later he had a recurrence after being perfectly well during all this time. Under anaesthesia this second intussusception was reduced by injecting warm water into the bowel. Following this he was quite well for six months, when he had a third attack.

On admission to hospital patient showed the usual signs of acute intussusception-vomiting, the passage of blood and mucus from the rectum, and the presence of an elongated swelling in the right iliac region. The abdomen was opened through the right rectus muscle and an intussusception was found occupying the last eight inches of the ileum, but not passing through the ileo-cecal valve. This was easily reduced, although the entering bowel was a good deal thickened by congestion. No adhesions were found, but the lymphatic glands in the mesentery corresponding to the intussuscepted portion of the bowel were much enlarged. Recovery was uneventful and the child was sent home.

Four months later (March, 1906) while at home, the child had what ap-

peared, from the history given by the mother, to be a typical attack of intussusception, during which blood and mucus were pasesd by the rectum. From this he recovered spontaneously, and when seen at hospital a few days later nothing abnormal could be detected. One month later (April, 1906) what would seem to be the fifth attack occurred, when in the early morning he was seized with abdominal pain, was sick four or five times during the day, bringing up a little blood on one occasion, and in the afternoon passed blood and mucus by the rectum. In the evening of the same day he was again admitted to the hospital. On admission he is stated to have been fat and healthy looking, but seemed drowsy: T. 96.4; abdomen flaccid, not tender; a definite tumor could be felt in the right iliac region passing into the right loin. Shortly after admission the abdomen was again opened, on this occasion by splitting the muscles in the right iliac region. An ileo-colic intussusception was then found about five inches long, the lower end of the ileum being prolapsed through the ileo-cecal valve. Reduction was more difficult than on the previous occasion, as the intussusception was very edematous and the mesenteric glands much enlarged, some to 1 1-2 inches in length. After reduction had been effected, three silk sutures were inserted into the mesentery of the lower part of the ileum, plicating and shortening it. Recovery was again uninterrupted and the child was sent home three weeks later.

Six years have now elapsed and the child has during that time had no return of abdominal trouble. He has grown into a fairly healthy looking boy, still showing the marks of the two

operations, but without any hernial protrusion at their sites. His experience of intussusception and its treatment is probably unique, for he was treated by inflation with air, injection with water, abdominal section twice, and on one occasion recovery seems to have been spontaneous. . What share the plicating of the mesentery at the second operation took in preventing recurrence must, of course, be doubtful, for the tendency of intussusception diminishes as age advances, and so it may be that no further attacks would have occurred had this not been done. Still its performance coincided with the termination of a rather unusual series of attacks of this affection.

CONCLUSIONS.

- 1. The tender age of infancy is not per se a barrier to abdominal section.
- 2. Reduction of the intussusception by laparotomy gives better results, in competent hands, at all ages than any other methods.
- 3. When familiar with the condition, the diagnosis can and should be made, with rare exceptions, within 17 hours of the onset.
- 4. When operated on within 17 hours of the onset, the general mortality will not be over 10 per cent. When operated on by the best surgeons, the mortality will not be over 5 per cent with the same early diagnosis. No resections will be required in this class.
- 5. Late diagnosis and operation means many resections and high mortality.

Intussusception, although clearly marked and easy of diagnosis, is, on account of its comparative rarity, more often not diagnosed and mismanaged than any other serious affection occurring within the abdomen today.

REFERENCES.

- 1. Richmond, J. M., El Paso, Tex.
- 2. Brown, W. L., and Brown, C. P., El Paso, Texas.
 - 3. Wright, M. O., El. Paso, Texas.
- 4. Flint, Joseph M., Proc. Conn., State Med. Soc. 1911.
- 5. Matheny, A. Malston. "Intussusception in Children," Penn. Med. Jour. 1911-12, XV., 440.
- 6. Koch & Oerum, 40 Danish Cases of Intussusception in Children. Edinburg Med. Jour. 1912, Vol. IX., p. 227.
- 7. Walton, quoted by, Lotsch, Bul. Kin, Wochser., 1913, L. 2140.
- 8. Kellock, T. H. Note on a Case of Recurrent Attacks of Intussusception. Lancet, London, 1912, 11, 154.
- 9. Quoted by Dowd, Annals of Surg., May, 1912.
- 10. Wrigh, A. L., and Morrison, O. C., "Intussusception with Atypical Symptomatology." Jour. of Iowa State Med. Soc's. July 15, 1913.
- 11. Taft, Charles E., Proc. Conn. State Med. Soc'y., 1911.
- 12. LeWald, Leon T., Am. Jour. of Obst., LXIX, p. 882.
- 13. O'Neil, Owen, Intestinal Obstruction with Special Reference to Intussusception in Infants. Proc. Conn. State Med. Soc'v., 1911, 254.
- 14. Sexton, Troy C., Las Cruces, N. M.

Smith, Edward W., Proc. Conn. State Med. Soc'y., 1911.

- 16. Overlock, Seldom B., Proc. Conn. State Med. Soc'y., 1911.
- 17. Eve, British Med. Jour., Sept. 1901, p. 582.
- 17. Moynihan, B. G. A. Abdominal Operations.

- 19. Ladd, quoted by Peterson, E. W., The Peril of Delay in the Diagnosis and Treatment of Intussusception in Infancy.
- 20. Clubbs, quoted by Peterson, E. W.
- 21. Lichtenstein, quoted by Peterson, E. W.
- 22. Collins, Arthur N., Strangulated Hernia in Early Infancy. Annals of Surg., Phila., 1913, LVII, p. 188.
- 23. Dowd, Charles N., Annals of Surg., Phila., 1913, LVII, p. 713.
- 24.—Anderson, A. B., and Brooks, Earl B., Celiotomy in a Child Three Hours Old. Western Med. Review, Omaha, Neb., September, 1913.

DISCUSSIONS.

Dr. C. E. Yount, Prescott, Arizona.—I am equally impressed with this timely, comprehensive and instructive paper which again opens up the point brought out by Dr. McGraw, that is, the great necessity for a correct diagnosis in every case. I was especially impressed by the opening paragraph of the paper because it brought up exactly the line of thought which I had hoped to use in discussing the paper, namely, that the average practitioner will probably see one of these cases in a life time, may diagnose one of them in a life time.

When Dr. McBride asked me to open this discussion I felt that he was making a very unwise selection, if he expected some one to speak from experience, because I have not had a case of intussusception in an infant that I diagnosed as such. I then began to discuss the matter with doctor friends of mine in and about Prescott to see what their experience had been and found that not one of the surgeons living there had had a case. However, one in the outlying districts reported such a case and that case was simalar to the second case, I think, reported by Dr. Vance, it being the child of a doctor. This case brings out several points that have been brought out before, and if permitted I will review it briefly.

First it brings out the importance of the tender age, nine months. It brings out the important fact of another, otherwise, strong and healthy infant; it brings out the third point of acute onset; a boy 9 months old. well grown, with exception of a tendency to constipation; at 5 p. m. he is awakened from sleep by pain; his mother insists that the cry is different from the ordinary "cranky cry;" in a short time the pain comes on again; it is spasmodic in character. The father (Doctor) concluded it was intussusception. At 4 a. m. next morning caught train for Phoenix, telegraphed his diagnosis ahead. Surgreon ready and operated at 8:30 a. m., or 151-2 hours after on-Intussusception easily reduced. eventful recovery.

Then again we see that the intussusception is easily reduced when operated early. That again brings up the diagnosis and the proper treatment, also the fact that the mortality is in direct ratio to the time of diagnosis and reception of proper treatment. The early operation necessarily lessens the shock because the patient has not endured the pain so long, and it necessarily makes the operation much more simple, one of reduction only, and it does away with that great factor in mortality, the resection of a gangrenous portion of the bowel.

Dr. S. D Swope:-I am sure that a great many more cases of intussusception in young children will be discovered in New Mexico in the next few years than has been in the last few years. I am sure there are a great many cases of intussusception seen by the average practitioner and not diagnosed as such because the matter has not been brought to his attention in the forcible way that Dr. Vance has brought it to the attention of the medical profession today. I can appreciate thoroughly the fact that an intussusception can occur in the small bowel, probably the ilium, as described by Dr. Noble, and not have the lumen of the gut entirely occluded. In other words an intussusception can take place and the lumen of the gut still remain intact to a certain extent. That being the case this would not become gangrenous until the circulation was further interferred with. It might remain quite a time in this condition until some agency would cause a swelling at the place, which swelling alone would cut off the circulation and produce the gangrene that we would expect to occur in the beginning. Personally, I have never seen a case of invagination of the bowel in a young child that I know of. That I may have seen some and didn't recognize, I will confess. I have seen a number of cases of intussusception in adults. Appar ently in one or two, I have seen where the bowels have invaginated and the blood supply has been interferred with, but sufficient circulation remained to insure the life of the issues. There is one point which the doctor makes which is particularly good: it doesn't do little babies any harm to give them a general anaesthetic under the modern means of administering a general anaesthetic. It is the surest way of finding out whether they have a sausageshaped tumor, or any kind of a tumor in their little bellies. A few whiffs of ether and the little patient relaxes and the thin walls are easily palpated, then your diagnosis can be more readily made. It is the careful diagnosis, doctors, that is going to win for us ultimately.

Dr. J. W. Laws:—In my experience, I can recall only one case of intussusception of the bowels. Not many months ago, a Mexican came for me at night, asking that I go quickly to see his child of eleven months that was passing blood from the bowels. On arrival a well nourished child about one year of age was found passing blood and mucous and having at intervals attacks of colicky pains and tenesmus. The parents stated that the child had been sick for three days, that purgatives had been given, but were uncertain as to whether bowels moved or not.

They stated that they had given aceite Mexicano and Lord knows what else, for many of these people give their children quicksilver or any patent medicine that may happen to be in the house. Supposing that the child had colitis or entero—colitis, resulting from the medication, a catheter and boric solution was boiled, prepara-

tory to washing out the lower bowel. The child had temperature of 100 1-2. On examining the abdomen the muscles were relaxed and a sausage-shaped tumor extending from the child's caecum to near the sigmoid flexure of the colon could be made out. I then realized that I was dealing with a case of intussusception of three days standing and informed the parents that the only hope for the child was an operation. Operation was refused and the child died the next afternoon. In a child of this age, with its history of medication, and neglecting to examine the patient, it would have been easy to have made a mistake, jumped at a conclusion, prescribed a bismuth and paregoric mixture, and then later to have wondered why the child died. I am frank to confess that I did not even suspect intussusception until I found the sausageshaped tumor.

Dr. F. W. Noble:-I want to talk on that subject because I have seen a number of bowel cases that haven't followed the usual course of such ailments. One Saturday night, about five years ago I was called up to Blank to see a patient on whom the previous Sunday the doctor had made a diagnosis of La Grippe, and about three or four days afterward he decided that he probably had an intestinal obstruction. The child was four years old. I saw the child one week after the diagnosis of grippe and about four days after the diagnosis of obstruction of the bowels. The temperature was about 1011-2 and pulse a little over 120-the abdomen wasn't much distended, there was absolutely no tumor to be felt. The bowels had moved more or less with a syringe when I saw the case. (A small amount of fecal matter and history of some flatus passed). Now the special thing about this case is just what I am going to tell you; we went into the abdomen a week after the commencement of the intussusception in a boy four years old, on whom the doctor says the outlook isn't quite so good, and there was about five inches of the ileum in an intussusception; there wasn't any gangrene; all we had to do was to straighten it out. There wasn't any tumor because there wasn't enough there to make a tumor; the bowel was flat, there was no inflammation or swelling, just simply flat. So we mustn't always look for tumor. One important thing that I didn't hear Dr. Vance state, although he probably had it in his paper, because it was quite complete, that is, that every one should strip the children when they have an abdominal condition, or condition that they think might be abdominal, especially persistent vomiting. very prominent symptom in intussusception is interrupted peristalsis. A child's abdomen is thin and you can see the peristalsis by watching five to fifteen minutes. There is very often the history of bloody stool, and that is very important, persistent vomiting, bloody stool, and not always tumor, nor bloody stool; but very often interrupted peristalsis. There was absolutely no gangrene a week after the commencement of the intussusception. shows the difference between what should expect to find and what is present. Murphy used to teach us that in strangulated hernia in 24 hours we have gangrene, after 48 hours we might as well not operate. There is this question of gangrene and the time-by the way, the physician idea as to the knowing exactly the condition of the contents of that abdomen simply from the outside, we don't know it. Murphy operated for obstruction of the bowels, when he had lead poisoning; operated for obstruction of the bowels in spite of another man's diagnosis of lead poisoning, showing that as capable a man as Murphy doesn't always know the exact conditions inside of the abdomen until he gets in there. So even a very able man is apt to be mistaken when it comes to knowing the condition of an intussusception or obstruction of the bowels until he gets in there. How then is he to know in time whether he has reduced an intussusception or not? He can always safely go in and see what he has, and see whether he has it reduced. Then, again, showing the fact that we don't know exactly what we are going to get when we get inside; at the Holmes Home and Hospital in Guthrie, one of the nurses called called me up about 1 o'clock at night saying that her rupture had come down and could not be replaced. I told them what to do; elevate the foot of the bed, give mor-

phine, etc., and get it back; and at 2 o'clock she wasn't any better, so I went to see her and advised operating right away. She had no difficulty until Saturday night rather early; complained of very little pain. told me in the history that her bowels had moved every day, that she did think she had malaria on the previous Thursday and had taken quinine for it, and also told me on Saturday she had been down town, about two miles, and back. We operated on her just as soon as we could get ready, about 6 o'clock in the morning-called at 2 and operated at about 6. It looks as though we ought to get splendid results there, because here is a history of a woman seemingly taken with strangulated hernia the night before and operated the next What was it we found inside? We found over two feet of gangrenous colon: you can't tell what is inside unless you get in there, and the safe proposition is to get in there and get in early, and this meddling around with the air and water injections is a bad thing for the patient. If they must be tried, all preparations for operation should be made and not more than an hour or two of precious time wasted trying to relieve the patient by these uncertain methods.

Dr. James Vance:-In closing the discussion I should like to reply to Dr. Noble. He has evidently gotten the impression that I advocate the use of air or water or gas in reduction. I do not. I have only mentioned those things to make the paper more or less complete, because reduction has been done by these methods and when you get men like Koch and Oerum advocating reduction of the intussusception by water pressure, backed by 400 cases, you can't ignore it. But in taking the testimony by surgeons generally over the world, with the exception of perhaps the Germans, the occurence of opinion is very largely favor of operation for many reasons. It is obvious in the case that Dr. Noble reports that the child never had intussusception for the whole week; you rarely get intussusception for longer than 48 hours, without gangrene. His case merely had some form of intertinal trouble before intussusception took place. It can take place concurrent with any other disease, of course, and especially it is liable to happen with entero-colitis, and it may come after you have had four weeks of entero-colitis. That is all brought out in my paper. Under such circumstances you not only know when intussusception takes place, but when you get the bloody stools, and tumor, you know you have an intussusception.

SOME INTERESTING CASES WITH ERRONEOUS SURGICAL DIAGNOSIS.

By Henry R. McGraw, M. D. Denver Colo.

(Paper of the fraternal delegate from the Colorado State Medical Society. Read before the 33rd annual meeting of the New Mexico Medical Society, Albuquerque, N. M., October 5, 6, and 7, 1914.)

The very puzzling, and the most interesting cases we, as medical practictioners, come in contact with, are many and sometimes exceedingly trying. The rules laid down for examination, and the methods used for arriving at our conclusions with reference to diagnosis, are sometimes misleading, as in taking the history, which is of great importance. The patient is so liable to mislead you, or you may unconsciously mislead yourself. I have seen so many instances in which a physician getting a clue, his mind is immediately directed in a certain channel which is erroneous, and he is unable to see differently. The history and diagnosis of a case as given by a brother physician, has its influence upon a consultant—very often causing him to render a diagnosis contrary to his beeter judgment and the symptoms revealed.

In this day, with our advanced methods of diagnosis, it is our duty to avail ourselves of everything that will tend to throw light upon the case. In the following cases I have refrained from dealing with minor details, and have simply brought out the salient points.

Case No. 1. Women aged forty-two, entered the hospital with a diagnosis of Gastric Ulcer. The patient had severad very profuse hemorrhages. The history obtained from her husband was to the effect that previous to five days to her admission to the hospital she was perfectly well. At that time she complained of pain in the chest, shortness of breath, elevation of temperature, some cough, and she raised a rusty colored mucous. He said he did not know whether is was vomited or coughed up.

At the time of my examination the patient was unconscious, consequently hampering my evidence. The abdomen was negative. On examination of the chest a high quality note was detected over the upper part of the sternum, which led me to believe that there was a considerable dilation of the esophagus, and this with a great increase in the cardiac dullness and a slight tracheal tug, rendered the diagnosis of aneurysm with rupture into the esophagus comparatively easy. The patient died the next morning, and the autopsy confirmed the diagnosis.

Case No. 2. A young married woman consulted me on account of severe pain in the left iliac region. The pain was quite constant and at times very acute. Upon examination and consultation it was found that there was a mass about the size of an orange in the left side of the pelvis, with some rigidity of the left rectus. From the

history and examination, we decided that a pyosalpinx was responsible for the pain, and an operation was recommended, and performed, and upon opening the abdomen, it was found that the pelvis was perfectly normal, but the cecum was long and turned over on the left side, with a badly inflamed appendix. The appendix was removed, the cecum put into its normal position, and the patient made an uneventful recovery. The mass was due to a filled cecum.

Case No. 3. I was called hurriedly to the hospital one night to operate a case for gall stones. The patient, a man, age about forty, was of slight build. He was frantic with pain, slightly jaundiced. In the region of the gall bladder he was extremely tender, and very rigid. His pain was so severe that it was impossible to get a history, but upon careful examination, an Argyll-Robertson's pupil, and the absence of the patella tendon reflex made the diagnosis clear.

Case No. 4. This patient was sent into the hospital with a diagnosis of a ruptured appendix with general peritonitis. The patient, a Bulgarian, could speak but little English, and consequently the history was very unsatisfactory. The physician reported some fluid in the abdomen, pain over McBurney's point, abdomen very rigid, incessant vomiting, rapid pulse, and slight temperature.

Examination—Fluid in the abdomen, pain over the whole abdomen, vomiting, veins over abdomen dilated, slight jaundice, and liver dullness very markedly diminished, caused me to make a diagnosis of cirrhosis of the liver. The acetic fluid has since been removed by trocar.

Case No. 5. A graduate nurse, age 35. The present crouble began ten years ago with severe back acne, head ache, nausea and rever, which fasted three days. After remaining in bed for three weeks she had no trouble for two years, when the attacks returned and became frequent. Wearing a corset, fitting, bending over, or working hard was always rollowed by pain in the back, which extended down the right side to the urethra, and was intense, often causing delirium.

A diagnosis of appendicitis was made, and the appendix removed December 10th, 1907. The operation gave no relief, and for two years the attacks went on as before. The pain became a dull, sickning ache, and would continue for weeks at a time. The urine always looked clear until December, 1912, when after a very severe attack of pain and nausea, the urine became bloody and thick. The slightest motion caused faintness and nausea. Relief could only be obtained by the use of morphine. All this time she gained weight, and when at the hospital in July, 1913, her weight was 212.

A cytoscopic examination was made, and the right ureter found occulated at a point 10 cm. from the bladder. No urine escaped either through the catheter or ureteral meatus. From the history and cystoscopic examination a probable diagnosis of stone in the ureter was made.

At operation I found a stone in the ureter near the bladder, with the dilation of the ureter to about the size of a small intestine. The kidney was dilated to about six times its normal size, with complete destruction of all the kidney substance. I removed the kid-

ney and the patient made a beautiful recovery, and has been perfectly well ever since.

Case No. 6. I was called in consultation to see a very robust young man and was told that he had an intestinal obstruction which would require an immediate operation. History of the case was to the effect that he was taken ill three days previous with severe abdominal pain, fever, and constipation. On examination, the abdomen was very tender with terrific boardy rigidity, and the bowels had not moved for three or four days. The temperature was 102 degrees, pulse rapid, full and somewhat bounding. The abdominal rigidity decreased somewhat from above downward. There was slight shortness of breath, and an anxious facial expression which led me to examine the lungs. There were rales at the base of both lungs, which gave me the clue to the real condition.

A large dose of castor oil relieved the obstruction, and the development of cough and rusty sputum the next day confirmed the diagnosis of pneumonia with diaphragmatic pleurisy.

Case No. 7. This case, a woman aged 43, was referred to me by a physician in southern Colorado, with a diagnosis of carcinoma of the uterus. She had been informed that a hysterectomy was necessary to save her life. She had not considered her condition serious, owing to the fact that she attributed her illness to a beginning menopause. She complained of pain in the back, and considerable discomfort in the pelvis. She had lost about 30 pounds in weight. There was marked aenemia, slight emaciation, and feebleness.

Menstruation somewhat slight, and very irregular, and quite painful. careful bimanual examination was made, and a small tumor of the cervix found. This proved to be an innocent fibroid, and not responsible for the condition. After repeated examinations, and careful questioning, she reluctantly admitted that every day at stool she lost considerable blood, said that was a trifling matter. A rectal examination was made, and internal hemorrhoids and an open hemorrhoidal vein found, which were operated and she made a very rapid recovery-gaining back her lost weight in about one month. I have seen her recently and she is perfectly well.

I have been called in consultation repeatedly to see a case of appendicitis which proved to be pneumonia.

Too often these cases go to the operating room, and with disastrous results. It is my routine practice to examination the lungs, the pupils and the patella tendon reflex in all cases of abdominal pain. I am thoroughly convinced that many of the cases of ether pneumonia have pneumonia before the ether is given.

The blood findings are often valuable, and render considerable assistance in making a diagnosis, but we must not rely too much upon nor expect to find, a leucocytosis in all cases of appendicitis.

Indigestion should always be looked upon as a very dangerous signal, and it should be given the most careful consideration, not only on account of it being the forerunner of so many stomach conditions, but on account of its reflex significance. The stomach is the mouth piece of all the abdominal viscera, and when it gives you the

warning, take cognizance of the fact, and scrittinize every abnormal viscus.

As correct diagnosis is a scientific structure, built upon the solid foundation of knowledge. This superimposed structure is the welding together of clinical history, signs, symptoms, and laboratory findings.

DISCUSSIONS.

Dr. James Vance:-

I certainly enjoyed hearing Dr. McGraw's paper and can endorse everything that he has said, and we all have had a number of patients of the same kind, that have been incorrectly diagnosed, and personally I recall right now the case of a little cheap opera singer down there in El Paso. gave a history of missed menstruations for two or three months, and claimed that prior to the preceding Saturday she had no swelling at all in the abdomen and that on Saturday, a week before I saw her, she claimed that then for the first time she noticed a tumor in the abdomen. On examination there was a tumor equal to a six months pregnancy, perfectly symmetrical in contour and in the middle of the abdomen. There were no foetal heart sounds. had tried to produce an abortion by passing some instrument into the uterus, and she had done this before the Saturday men-Temperature 103, and pulse 120. and she said that she had had no tumor, except for one week's time; there was a tumor the size of six months pregnancy. The tumor, as I said, was continuous, with the uterus as far as I could tell, except that cervix was tipped up beneath the pubes. I couldn't make any certain diagnosis; she was bleeding from the uterus from having interferred with what she supposed was pregnancy; I was inclined to doubt her history and thought that she had a pregnancy. However, by careful and bimanual examination I was convinced, on account of the cervix being tipped up, beneath the pubes and the size of the mass, that it was a tumor, and concluded to open the abdomen. There was a perfectly symmetrical tumor, exactly resembling a pregnant uterus, and I thought at first that I had made a mistake, but going around the tumor it was found that it sprung from the left broad ligament. I found that it was a pus tube, the size of a six months pregnancy. Now, whether she was telling the truth I don't know; I had no history of it except her own statement. Anyhow, that was her condition, and the tumor was removed. The pus tube had the thickest walls I have ever seen; it was pink and pretty to look at: even when I had the abdomen open it looked exactly like a pregnant uterus. We have all seen cases of polypi in the uterine canal. and quite usually they have been diagnosed cancer, and we have seen many other cases, and made many mistakes ourselves. There is one case in connection with a hypernephroma of the kidney I would like to bring out, but I will bring it out in discussion of Dr. Swope's paper. Unquestionably, the only way to make a diagnosis-is not to take for granted what has gone before, and go into every detail yourself and take some time in doing it; very rarely a man can make a diagnosis with one examination and he has certainly got to be careful, and not rely too much on what the patient tells him. The history, very often, as given by the patient is entirely erroneous, as was the case in this tumor which I have just referred to.

(Discussions continued in December Journal).

ABDOMINAL DIAGNOSIS WITH SPECIAL REFERENCE TO PAIN.

WILLIAM R. LOCKETT, M. D. Surgeon Carthage Fuel Company, Carthage, New Mexico.

(Read before the 33rd annual meeting of the New Mexico Medical Society, Albuquerque, New Mexico, October 5th, 6th and 7th, 1914).

In this paper there is no attempt at completeness. I shall only consider some of the more important painful abdominal conditions that demand early diagnosis in order that life may

be saved, and shall mention some but not all of their diagnostic features, probably giving more attention to pain than to any other one symptom.

The importance of the early and correct diagnosis of acute abdominal conditions need hardly be impressed upon vou. All acknowledge its imperative necessity and while I shall present nothing new, the very great importance of the subject would seem to be sufficient excuse for the frequent repetition of those symptoms that must be relied upon to point the way to successful treatment. Surely it is a large and interesting field for study and observation, too large for an hour like this and for a man like me, but who would not be a good diagnostician and to achieve to anything one must attempt it.

Taken altogether pain is one of the most constant and important expressions of abdominal lesions and a thorough understanding of abdominal pain, the pathology of its production, its onset, character, course, localization, variation, radiation, its physical and its psychical manifestations, is undoubtedly of great diagnostic aid to the physician and surgeon. A knowledge of abdominal pain is also helpful in understanding other important symptoms which may or may not be present at a given time and whose presence or absence at such time may mean so much to the troubled diagnostician. So that I am of the opinion that if one has made himself familiar with abdominal pain in all its forms, expressions, and relations, he has of necessity become acquainted with most all other symptoms of abdominal pathology whose presence or absence together with that of pain and their correct interpretation

are essential to successful diagnosis Pain is not always an unmitigated evil but often serves a useful purpose by causing the sufferer to guard and protect that part or organ affected and by compelling him to seek relief before irreparable damage has been done. How much better for humanity would it be if the invasion of all diseases was marked by pain sufficiently severe to at once drive the individual to the physician! How many thousand lives might yearly be saved from a slowly but surely approaching death from tuberculosis and cancer, if their early presence in the human body was manifested by severe pain!

Pain, and especially abdominal pain, must not always be immediately relieved, its voice in diagnosis must first be heard and often it is most unwise to relieve the sufferer at once. however much one would like to do so. It is, however, never necessary to allow prolonged severe suffering, for then pain becomes a terrible evil, racking the organism, preventing sleep, destroying appetite, deteriorating the mind and disorganizing and demolishing the vital functions, the very centers of life itself. So that if the presence of an abdominal emergency is suspected pain must not be relieved until the diagnosis is made and the treatment to be instituted decided upon. Morphine administered before a diagnosis is made allays the pain, relieves the anxiety, causes the disappearance of rigidity, slows the pulse, abates mental shock and in these and other ways obscures the real condition.

It has occurred to me that I can best present what I shall have to say by means of the following classifica-

tion. It has no special merit but some etiologic significance.

- 1. Refered abdominal pain. *
- 2. Diagnosis of various forms of abdominal colic,
- 3. Diagnosis of inflammatory conditions.
 - 4. Diagnosis in abdominal trauma.
- 1. Referred Abdominal Pain.— Pains produced elsewhere but referred to the abdomen are not at all uncommon and have been the cause of grave errors in diagnosis and for these and other reasons should be known to the surgeon. Some of the causes of referred abdominal pain are the following conditions: The abdominal crises of tabes dorsalis should be remembered, the gastric crises are the most common but nephritic, rectal, urethral and clitoral crises have been described. Rheumatoid arthritis or rheumatism of the spinal column, tumors of the spine. kyphosis and scoliosis, spinal meningitis, slow and small hemorrhage in the spinal canal or cord and degenerative and irritative spinal cord and nerve lesions. Lumbo-abdominal and intercostal neuritis and neuralgia, rheumatism of the abdominal muscles, the diaphragm or of the uterus. Hysteria, referable to the abdominal wall, peritoneum, stomach, intestines, kidneys, bladder and female generative organs should be mentioned. Angina pectoris, cardiac dilatation and malignant endocarditis are occasional causes. states that the pain of pericarditis may be referred to the appendicaecal region and be quite confusing. I wish to call special attention to pleurisy and pneumonia as a cause of abdominal pain, most common in children but also occurring in adults. The condition may simulate appendicitis and operations

have been begun believing appendicit existed. There may be abdominal pain, tenderness, rigidity, nausea and vomiting. In such a case in children with high fever examine the chest and study the pulse-temperature-respiration ratio. In pneumonia the abdominal wall is sensitive to superficial pressure but insensitive to deep pressure. In pneumonia there is slight reduction of the rigidity at the beginning of inspiration and the rigidity is less marked and more easily overcome.

In what is known as tranferred pain, the impulse is transferred directly across the cord to the other side or to a higher or a lower level in the cord, thus changing the peripheral location of the pain to the opposite side or to a higher or lower level on the body wall. Pain may be found in the opposite side of the body in appendicitis, pustubes, diseased ovaries, renal calculus and pelvic peritonitis. The shoulder pain of some abdominal conditions is said to be due to irritation of the phrenic nerve which carries the stimulus to the roots of the cervical nerves from whence the sensation is referred as pain to their area of distribution. In sympathetic pain there is an overflow of irritation from the primary to adjacent nerve centers causing pain to appear in the area supplied by the nerves from those centers.

What I have said is doubtless sufficient to emphasize the importance of these forms of pain and that is what I have desired to do.

2. Abdominal Colic.—Colic might be defined as the spasmodic contraction of the walls of an intra-abdominal viscus or canal caused by either irritation, obstruction or nervo-muscular incoordination. Certain symptoms are

more or less characteristic of all forms of abdominal colic. The pain may be localized indicating its origin, may be referred to a part or the whole of the abdomen and may radiate from its point of origin in various directions, all of which is of great diagnostic value and should be carefully studied. The pain of colic is a spasmodic pain and the condition may or may not be complicated by the presence of inflammation. The pain of colic is sudden in onset, intermits, recurs in paroxysms and is relieved by pressure. The pain of inflammation is gradual in onset, is continuous and is made worse by pressure. In colic the patient is restless and tosses about seeking relief by changing positions, while in inflammation the patient assumes a characterisattitude and is quiet and motionless. In colic fever is usually absent, may be present but when present is as a rule not high. The pulse may be normal or slightly hurried and of good volume. After severe continued pain the pulse becomes accelerated and more feeble. Shock and its accompaniments may or may not be present depending upon the severity and duration of the pain and the susceptibility of the patient. In some attacks of colic the pain is as severe as any pain ever experienced by a human being and there may be shock, collapse and unconsciousness or convulsions. Muscular rigidity may be present, but is less marked, vomiting is common, may occur with or without nausea and may or may not be followed by relief of the pain.

Intestinal Colic. — Sudden severe paroxysmal pain referred to the umbilical region, at times to the whole abdomen and with radiating and darting, fleeting pains in different direc-

tions. If the spasm is in the small intestine the pain is above the umbilicus, if the jejunum and cecum, the appendicecal region, is involved the pain is around the umbilicus, and in colonic colic the pain is generally referred at first around the umbilicus and later to the area below it. As the spasm progresses toward the rectum and anus the pain passes toward the pubes and evacuation of the bowels is frequently followed by relief. Nausea and vomiting are common. As a rule the pulse and temperature are but little changed and shock is not marked but the pain of intestinal colic is at times of such severity as to cause a considerable degree of shock with rapid pulse and possibly subnormal temperature but in some cases there may be slight fever.

Pancreatic Colic.—A calculus impacted in Wirsung's duct may cause intense spasmodic pain centered in the epigastric region and radiating between the shoulders and down into the deeper parts of the abdomen. Behan in his recent book on pain states that the pain of pancreatic colic is generally in the left epigastrium, radiates to the left shoulder, while that of gall-stone colic is present in the right side of the epigastrium and radiates to the right shoulder. Pancreatic colic may be associated with hiccoughs, vomiting, rigors, cold sweats and collapse. flammatory conditions, gall-bladder and gall-duct disease often complicate the situation.

Gall-stone Colic. — Premonitory symptoms such as indigestion, belching and upper abdominal discomfort are often present. Gall-stone colic is prone to occur three to six hours after a meal has been taken. The onset is sudden with violent spasmodic and paroxysmal

pain in the gall-bladder region and the right hypochondrium, the pain being referred to the back, up to the right shoulder and down toward the umbilicus but rarely below it. There may be tenderness and rigidity more or less marked in the gall-bladder region, the upper segment of the rectus muscle over the gall-bladder being in a state of contraction, while the segment over the appendix may be flaccid. The pain of biliary colic has been declared to be, by women who have experienced both forms, more severe than the pains of parturition. In severe cases there is profound shock, with profuse clammy prespiration, rapid feeble pulse great mental anxiety and fear. abdomen becomes somewhat distended and there is nausea and vomiting. The pain may cease as suddenly as it began or may continue with intermissions for hours or days.

Renal Colic:—The severity of the pain depends upon the roughness and movability of the stone rather than upon its size. "A fixed stone in the kidney and a smooth stone in the pelvis may cause little or no pain. A rough stone in the pelvis causes severe pain." (Da Costa's Modern Surgery).

The distinguishing features of this pain are that the seat of severest pain is located posteriorly in the kidney region and the pain radiates downward to the hypogastrium, to the testicle (which may be retracted), and to the thigh. Vesical irritation, frequent micturition with the passage of but little urine with oliguria or hematuria may be present. There may be nausea and vomiting shock, collapse, subnormal, normal or slightly vated temperature. What is called the reno-renal reflex in which the pain

is experienced in the opposite healthy kidney should be remembered. Renal colic may also be caused by mucus, blood clot, uric acid and fragments of new growths detached and movable in the kidney pelvis

Dietl's Crisis:—Is characterized by a sudden severe pain in the kidney region with nausea, vomiting, shock and collapse. It is probably due to torsion or kinking of the ureter or the vessels of a movable kidney. A tumor may form and suddenly disappear with the passage of large quantities of urine and the relief of the condition.

Appendicular Colic.—This form of colic is at times referred to in medical literature and is said to be due to spasm of the muscular structure of the appendix in an attempt to expel concretions or other foreign bodies. I do not consider the term a proper one and think it should be considered under the subject of appendicitis, an inflammatory condition.

Lead Colic.—The pain is that of a severe intestinal colic, being intense and strikingly recurrent. Two points to be remembered about lead colic are that the abdominal muscles are rigid but the abdomen is flattened or scaphoid and not distended as in most other colics, and second that a slow pulse is often found, a count as low as thirty beats a minute having been noted by Tyson. The pain of lead colic has been described as a feeling as though the intestines were being twisted or tied in a knot. During the pain the arterial pressure is much increased and the pulse is hard.

What has been not very correctly called uterine, tubal and ovarian colic, the colic of gout, uraemia, and the hypogastric pain of bladder distension

might be mentioned. The pain of colic should always be differentiated from the pain of peritonitis or inflammatory conditions. What has been said and what is to follow will aid in the differentiation.

3. Diagnosis of Inflammatory Conditions.—The characteristics of in flammatory pain have been mentioned. In inflammation the patient is usually quiet and motionless assuming the attitude that most relieves the pain and he guards and protects the part affected. In serous membranes like the peritoneum the pain is acute and lancinating, in connective tissue it is acute and throbbing, and in large organs like the liver, it is dull and heavy. All direct painful muscular lesions in the obdominal wall are the result of either inflammation, neuritis, neuralgia, myalgia or new growths. In neuralgia the skin is tender and painful to pressure made by pinching it between the fingers. In peritonitis the skin is not so tender and the pain is produced on deeper pressure. The seat of pain in peritonitis is probably in the subperitoneal tissue, which is richly supplied with nerve fibres which in turn are derived from the nerves of the anterior wall; thus explaining the reflex rigidity of these muscles when the peritoneum is irritated. It may be well to state that in some cases of peritonitis pain may not be present, but these are very virulent cases in which the abdomen contains pus and virulent products sufficient to destroy the nerve endings or to impair their efficiency. Such a condition may be met with in puerperal sepsis. Abdominal pain may change in character as the pathologic condition changes and such changes are of great diagnostic value. The absence of or the disappearance of pain where pain should be present and when not due to the administration of drugs should excite grave concern as probably indicating gangrene or fatal toxemia. This may occur in appendicitis, strangulated hernia, in certain cases of peritonitis and in other conditions.

Gastric and Duodenal Ulceration.— The differential diagnosis of these two conditions is not always possible. The results of the careful analysis of one thousand cases by Friedenwald (American Journal Medical Sciences, August, 1912), should be interesting and of value. In one thousand cases there were of

	Gastric	Duodenal
	ulcer	ulcer
1000 cases	40%	5.2 %
Pain	94%	96.5%
Epigastric tendernes		89 %
Normal acidity	46%.	48. %
Hyper acidity	30%	35 %
Subacidity	. 23%	16 %
Vomiting		21 %
Melena		54. %
Occult blood	81%	83, %
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In both conditions the pain and vomiting are more marked with hyperacidity. In gastric ulcer vomiting reileves the pain, in duodenal ulcer it does not relieve it. The pain of gastric ulcer is frequently located one or two inches above the umbilicus and often radiates to one side of the spinal column between the eighth and tenth dorsal vertebras. The pain of duodenal ulcer is more to the right of the midline and is not so often referred to the back. Pain occurring soon after a meal is likely due to gastric ulcer; pain occurring several hours after a meal and relieved by food, the so-called hunger pain is probably due to duodenal ulcer. The longer the interval between the time of ingestion of food and the appearance of the pain the farther away from the cardiac orifice of the stomach is the ulcer. The pain has often been described as burning, boring, gnawing or piercing in character. The pain of pyloric ulcer is as a rule greater than that of cardiac ulcer. The pain of duodenal ulcer is as a rule less severe than that of gastric ulcer, and in many cases does not radiate to the back but may radiate to the right scapular region. Distinct intermissions from pain and other symptoms varying from one to twelve months or more are common in both conditions. Kuttner, (Vol. 2, General Surgery-Murphy-Practical Medicine Series, 1914), in reporting eight hundred cases of duodenal ulcer stated that hunger pain while found in other conditions was most common in duodenal ulceration and that the painful point to the right of the umbilicus and about the middle of the rectus is seen almost as often in gastric as in duodenal ulcer. He says prognosis is more serious in duodenal ulcer on account of perforations and hemorrhages, perforations occurring in twenty per cent of duodenal cases, and in only seven percent of gastic ulcer cases, and that fatal hemorrhage occurs in eleven per cent ow duodenal, against three per cent in gastric ulcer.

Perforations:—Perforation of the stomach, duodenum, appendix, gall-bladder and typhoid perforations are characterized by similar symptoms with differentiating ones due to location, function, and other evident conditions which need not be mentioned here. In perforation there is sudden, localized, exeruciating boring or tearing pain,

localized muscle rigidity and tenderness. Shock may not be great for some time and there may be but little early change in the pulse and temperature. Gradually increasing shock supervenes; the pulse increases in frequency and feebleness and the temperature, which may have been normal, becomes somewhat elevated. The patient gives evidence of great fear and dread of an impending calamity and the facial expression is characteristic. There is aperistalsis, thoracic respiration, nausea and vomiting and beginning abdominal distention. As the extravasated ailmentary contents spread, depending upon their virulence, peritonitis more or less rapidly develops and becomes diffuse. Pain, tenderness, and rigidity now become general, their localizing diagnostic value in the same ratio becoming less and all the symptoms of general peritonitis become marked. Shock deepens, there is costal respiration, small rapid wiry pulse, easy vomiting, marked distention and elevation of temperature, and the skin is cool and clammy. The features are drawn and pinched, the facies are hippocratic, all signals of the troubled soul to the boatsman of the river Styx appealing for passage to relieving shores.

Appendicitis.—Frequently begins as a moderately severe general abdominal pain most marked in the umbilical region, and with nausea, vomiting and constipation; a condition hardly to be differentiated from a moderately severe intestinal colic. Soon, however, the diffused pain disappears and there is localized pain, tenderness and rectus ridigly in the appendicæcal region. There is acceleration of the pulse beginning abdominal distention, which may become marked, and some fever.

Some fever is probably present at some time in every case of appendicitis. The order in which the symptoms manifest themselves is of importance. If either fever or vomiting precede the pain the condition is likely not appendicitis. "If sharp pain precedes the act of vomiting it will almost invariably be found that peritoneal involvment is present: whereas if vomiting is the first symptom the diagnosis of any peritoneal lesion, especially appendicitis, must be accepted with great reservation." (Beaver, Journal A. M. A., May 13, 1905). Greatest tenderness is usually as Mc-Burney's point, but usually locations of pain and tenderness should be remembered, as near the gall-bladder, in the loin, toward the umbilicus, in the midline, on the opposite side, in the pelvis and in the rectum.

Acute Pancreatitis.—Often associated with hemorrhage. There is sudden agonizing deep seated pain in the epigastric region, dyspnea, cyanosis, quick pulse, epigastric distention and rigidity, subnormal or slightly elevated temperature and shock. A circumscribed epigastric swelling, resistant or tympanitic, may be felt. Behan states that pancreatic pain is generally in the left epigastrium and radiates to the left inguinal region or to the left scapula. If the pain is in the epigastrium and radiates around both sides of the thorax it generally indicates a calculus disorder.

Intestinal Obstruction.—The symptoms of intestinal obstruction vary with the cause, location, degree of obstruction and the presence or absence of strangulation. The symptoms are pain, vomiting, great peristalsis and distention above the obstruction, inability to pass gas or feces, and the occur-

rence of shock. The pain is violent and continuous with exacerbations. The continuous pain is due to the constriction and the exacerbations are due to the colic of peristalsis which for a time is violent. The continuous pain is about the seat of lesion, the exacerbations are more diffuse. Early in the case the temperature and pulse are not much changed and there is neither tenderness nor rigidity. If unrelieved these patients tend to pass into collapse due to toxemia and peritonitis.

Acute Dilatation of the Stomach.—
Often follows an operation. There is sudden epigastric pain and distention with much vomiting, collapse and rapid feeble pulse. The stomach tube withdraws large quantities of gas and fluid which may give relief but the organ may refill. It is a serious condition, should be thought of after abdominal operations and should not be confounded with intestinal obstruction.

Thrombosis and Embolism of the Mesenteric Vessels.—In thrombosis the onset is gradual, in embolism it is sudden. If the superior mesenteric artery is involved the pain is in the epigastrium and if the inferior vessel is affected the pain is felt below the umbilicus. There is sudden acute colicky pain with shock, vomiting, great restlessness, rapid pulse and early in the condition absence of rigidity, tenderness and distention. There may be discharges of blood from the bowel or bowel washings may contain blood. As the segment of bowel affected becomes paralyzed peritonitis and gangrene and the symptoms of obstruction, shock and sepsis are present.

Extra-uterine Pregnancy.—Rupture of an ectopic gestation is followed by agonizing pain in the lower abdomen

to one side of the uterus and intra-abdominal hemorrhage.

Intra-abdominal Hemorrhage. — In severe hemorrhage there is increasing pallor, frequency and feebleness of the pulse, the patient vawns, is restless, and there is dimness of vision and black specks float before the eyes. There is faintness, sighing respirations, dilated pupils, great thirst, cool and bloodless skin, subnormal temperature and increasing weakness. The mind may remain clear or there may be semiconsciousness, delirium or convulsions. Except in splenitic hemorrhage blood gathers in both loins, in the recto-vescical pouch in the male and in the rectouterine pouch in the female. "In hemorrhage from the spleen the blood usually clots quickly and there is an area of dullness which does not shift but progressively increases and it noted in the splenic region." (DaCosta).

4. Diagnosis in Abdominal Trauma. —The indications in all penetrating wounds of the abdomen are clear cut. The wound must be explored and if the abdominal cavity has been entered the condition of its viscera must be determined and the needed surgery applied. The form of exploration allowed is that of enlarging the wound and examining and inspecting it with the finger and eye of the surgeon.

To determine the condition present, to know what to do in contused abdominal wounds with their frequent life destroying complications is at times a most difficult problem. The surgeon's course of action must early be determined and promptly carried out. Delay, more than the careful watching of the patient for a few hours by one competent to judge the changing conditions, is all that may be permitted. Re-

gard every abdominal contusion as probably serious and study the history of the accident, and analyze all the symptoms present and absent. Fatal hemorrhage may rapidly ensue, peritonitis may develop early or late or both conditions may develop more or less simultaneously. Evidence of injury to the abdominal wall may or may not be present and in either case there may or may not be serious visceral injury demanding immediate surgery. Here again remember that pain is nature's signal that her forces are in danger, that she must have timely aid, and it is criminal to shroud the condition with a foggy mist of painrelieving drugs. In some cases symptoms of visceral injury appear early while in others they are delayed for hours or days and men have been known to continue at hard work after serious internal lesions had occurred.

After contusions of the abdominal wall, without internal injury, there may be pain, vomiting, some shock, tenderness and rigidity. Aperistalsis may be temporarily present due to the nerve shock of the injuring force, but it does not persist and soon disappears. The rigidity, a most important symptom, is largely voluntary, easily overcome and gradually subsides, differing from the rigidity of an internal lesion which is involuntary, continuous and localized at first but becomes diffuse as does the tenderness and pain in proportion to the increase of peritoneal involvement and irritation. Early after abdominal contusions neither shock, the pulse nor the temperature are of much diagnostic value but their subsequent course is of the greatest importance. If shock continues and increases, if the pulse increases in frequency and the tempera-

ture becomes somewhat elevated or in some cases remains subnormal, there is internal trouble demanding prompt operation. Aperistalsis and distention are fairly early symptoms after wounds of the hollow viscera, while internal hemorrhage, serious and probably fatal, may quickly follow rupture of the solid organs. Aperistalsis, silence on abdominal auscultation, if it is present soon after the injury, persisting, and peing plainly present before peritonitis has developed is in my opinion strong evidence of serious internal trouble. The most valuable early symptoms of visceral lesions are localized pain, rigidity, tenderness, aperistalsis and thoracic respirations. If internal hemorrhage is present its diagnosis is usually easily made and operation should be immediately performed and the bleeding controlled. As a rule it is possible to determine within the first few hours after an accident if operation is necessary and with the presence of localized pain, tenderness, rigidity, aperistalsis and thoracic respiration, persisting, operation is indicated. Later as peritonitis develops with the symptoms mentioned above under perforations, diagnosis of operative necessity can be made by a look and a touch; but most likely now it is too late for the surgeon's efforts to slow and strengthen the pulse, to check the constant vomiting, to quiet the awful anxiety and distress of mind, or to drive away the ever to be remembered facies of peritoneal death.

In this imperfect presentation of my subject I have endeavored to emphasize the importance of early diagnosis and the significance of pain. To me the subject is interesting, almost fascinating, and it is well known that to

be a good physician or surgeon one must first be a good diagnostician. All forms of pain, referred, reflected, transferred and sympathetic, the pain of colic and of inflammation, the cry of the peritoneum and the appeal of depleted blood vessels have been mentioned. I should like to encourage the special study of the subject by the general practitioner, the man of all burdens in our profession. It matters not what the disease nor where located pain is often one of the most impressive symptoms. From the acute dart of momentary indigestion to the chronic agony of cancerous ulceration; from the burning, piercing wound of perforation, to the pain, pallor and prostration of ruptured ectopic gestation the surgeon's mind must run seeking everywhere a ray of light, a bit of truth to decide him in taking such action as will result in the preservation of the life and the future usefulness of the sufferer.

Abstracts

HEART DISEASE.

An ideal classification of diseases should be according to their pathogenic agent or process, asserts Richard C. Cabot, Boston (Journal A. M. A., Oct. 24, 1914), and not according to the region affected or function disturbed. Hence he criticizes the usual classification of heart disease, and says that mitral regurgitation and myocarditis are vague general terms like spinal paralysis or brain disease. The practical aspects of the case are found in the fact that what we need to know is the disease that produces these symptoms. He has studied 600 recent hospital cases of heart disorders and found them to group themselves without much resistance into four

classes: rheumatic (streptococcic) syphilitic, arteriosclerotic and nephritic. About 5 per cent. remain not so easly classified, and the remaining 2 per cent. are "goiter hearts." Two hundred and seventy-eight of the 600 patients were rheumatic, females (61 per cent), predominating. Sixty per cent. of the rheumatic cases began before the twenty-second year, and the typical rheumatic heart patient is therefore a young girl. Of seventy-four syphilitic cases, 70 per cent, were in men, and the typical syphilitic heart patient is a middeaged man (average age 47) with aortic regurgitation and no rheumatic history. The ninety-three arteriosclerotic patients averaged 59 years of age. The 117 glomerulonephritic patients averaged 36 years. The arteriosclerotis patients average 23 years older than the nephritics, and the males and females are about equal in the two groups. Diagnosis, prognosis and treatment are on a more rational basis with this classification if we give up the vague terms of myocarditis, cardiorenal disease, aortic and mitral regurgitation, or qualify them with the terms rheumatic, arteriosclerotic, syphilitic, etc. Cabot says practically all the stenosis cases belong in the rheumatic group.

New and Nonofficial Remedies.

Since publication of New and Nonofficial Remedics, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies:"

Hypodermic Tablets of Emetine Hydrochloride, Mulford.—Each tablet contains emetine hydrochloride, 0.016 Gm. H. K. Mulford Co., Philadelphia (Jour. A. M. A., Oct. 3, 1914, p. 1204).

Acne Vaccine.—Marketed in boxes of 4 syringes containing 25, 50, 100 and 200 million killed bacilli. Also in boxes of 2 syringes containing 50 and 200 million

killed bacilli; boxes of 6 ampoules containing 10, 25, 50, 100, 200 and 500 million killed bacilli, with a syringe; and boxes of 2 ampoules containing 5 0and 200 million killed bacilli, with a syringe: E. R. Squibb and Sons, New York.

Bacillus Coli Communis Vaccine.—Marketed in boxes of 4 syringes containing 100, 200, 500 and 1,000 million killed bacilli. Also boxes of 2 syringes containing 100 and 500 million killed bacilli and boxes of 2 ampoules containing 100 and 500 million killed bacilli, with a syringe. E. R. Squibb and Sons, New York.

Bacillus Pertussis Vaccine.—Marketed in boxes of 4 syringes containing 25, 50, 100 and 200 million killed bacilli. Also boxes of 2 syringes containing 50 and 200 million killed bacilli; boxes of 6 ampoules containing 25, 50, 100, 200, 300 and 500 million killed bacilli, with a syringe; and boxes of 2 ampoules containing 50 and 200 million killed bacilli, with a syringe. E. R. Squibb and Sons, New York.

Pyocyaneus Vaccine. — Marketed in boxes of 4 syringes containing 100, 200, 500 and 1,000 million killed bacilli. Also in boxes of 2 syringes containing 100 and 500 million killed bacilli. E. R. Squibb and Sons, New York.

Gonococcus Vaccine. — Marketed in boxes of 4 syringes containing 100, 200, and 500 million killed gonococci. Also in boxes of 2 syringes containing 100 and 500 million killed gonococci; boxes of 6 ampoules containing 50, 100, 150, 350, 500 and 1,000 million killed gonocicci, with a syringe. E. R. Squibb and Sons, Nèw York. (Jour. A. M. A., Oct. 3, 1914, p. 1204).

Meningococcus Vaccine, Immunizing.— Marketed in boxes of 3 syringes containing 100, 500 and 1.000 million killed meningococci. E. R. Squibb and Sons, New York.

Meningococcus Vaccine, Curative. — Marketed in boxes of 4 syringes containing 100, 200, 400 and 500 million killed meningococci. Also in boxes of 2 syringes containing 100 and 500 million killed meningococci; boxes of 6 ampoules containing 100, 100, 500, 500, 1,000 and 1,000 million killed meningococci, with a syringe. E. R. Squibb and Sons, New York.

Pneumococcus Vaccine.—Marketed in boxes containing respectively 100, 200, 400 and 500 million killed pneumococci; boxes of 2 syringes containing respectively 100 and 500 million killed pneumococci; boxes of 6 ampoules containing 100, 100, 500, 500, 1,000 and 1,000 million killed pneumococci, with a syringe, and boxes of 2 ampoules containing 100 and 500 million killed pneumococci, with a syringe. E. R. Squibb and Sons, New York.

Staphylo-Acne Vaccine.-Marketed in boxes of 4 syringes containing 100 million killed staphylococci and 25 million killed acne bacilli, 200 million killed staphylococci and 50 million acne bacilli, 400 million killed staphylococci and 100 million killed aene bacilli, and 500 million killed staphylococci and 200 million killed acne bacilli; boxes of 2 syringes containing 100 million killed staphylococci and 50 million killed acne bacilli and 500 million killed staphylococci and 200 million killed acne bacilli; boxes of 2 ampoules containing 100 million killed staphylococci and 50 million killed acne bacilli and 500 mllion killed staphylococci and 200 million killed acne bacilli, with a syringe. E. R. Squibb and Sons, New York.

Staphylococcus Vaccine.—Marketed in boxes of 4 syringes containing 100, 200, 500 and 1,000 million killed staphylococci; also in boxes of 2 syringes containing 100 and 500 million killed staphylococci; boxes of 6 ampoules containing 100, 250, 500, 500, 1,000 and 2,000 million killed staphylococci, with a syringe, and boxes of 2 ampoules containing 100 and 500 million killed staphylococci, with a syringe. E. R. Squibb and Sons, New York.

Streptococcus Vaccine. — Marketed in boxes of 4 syringes containing 100, 200,

500 th d 1,000 million killed streptococci; also in boxes of 2 syringes containing 100 and 530 million killed streptococci; boxes of 2 ampoules containing 100 and 500 million killed streptococci, with a syringe. E. R. Squibb and Sons, New York.

Typhoid Vaccine, Curative.—Marketed in boxes of 4 syringes containing 100, 200, 500 and 1,000 million killed bacilli. Also in boxes of 2 syringes containing 100 and 500 million killed bacilli; boxes of 6 ampoules containing 100, 100, 500, 500, 1,000 and 1,000 million killed bacilli, with a syringe, and boxes of 2 ampoules containing 100 and 500 million killed bacilli, with a syringe. E. R. Squibb and Sons, New York.

Typhoid Vaccine, Immunizing.—Marketed in boxes of 3 syringes containing 500, 1,000 and 1,000 million killed bacilli. E. R. Squibb and Sons, New York.

Small-pox (Variola) Vaccine (Glycer-inated).—Each dose in separate aseptic sealed glass tube, with bulb and needles. Boxes of 5 and boxes of 10 tubes. E. R. Squibb and Sons, New York.

Diphtheria Antitoxin.—Curative doses, marketed in syringes containing 2,000, 3,000, 4,000, 5,000, 7,500 and 10,000 units. E. R. Squibb and Sons, New York.

Antidysenteric Serum. — Marketed in vials containing 50 Cc. H. K. Mulford Co., Philadelphia, Pa.

Antipneumococcic Scrum ,Polyvalent.— Marketed in syringes containing 20 Cc. Also marketed in vials containing 50 Cc. H. K. Mulford Co., Philadelphia, Pa.

Antistreptococcic Scrum, Polyvalent.— Marketed in vials containing 50 Cc. H. K. Mulford Co., Philadelphia, Pa.

Antistreptococcic Serum, Scarlatinal, Polyvalent.—Marketed in vials containing 50 Ce. H. K. Mulford Co., Philadelphia, Pa.

Typho-Scrobacterin, Mulford, Immunizing.—Each package contains 3 syringes of Typho-Scrobacterin graduated as follows: First dose, 1,000 million killed sensitized typhoid bacilli; Second dose, 2,000 million killed sensitized typhoid bacilli; Third dose, 2,000 million killed sensitized typhoid bacilli. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Oct. 10, 1914, p. 1296).

Cymarin. — A neutral, non-glucosidal substance obtained from Aporcynum cannobinum and Apocynum androsemiforilum. Cymarin resembles amorphorus strophanthin in its actions and is about equal to it in activity. It is more active when injected intravenously or intramuscularly than when given orally. Its uses are much like those of digitalis, but it is best suited in the form of Cymarin Tablets, 1-200 Gr. and Ampoules Cymarin Solution containing 1-60 Gr. cymarin. The Bayer Co., New York. (Jour. A. M. A., Oct. 17, 1914, p. 1393).

Maltine Malt Soup Extract.—Malt ine containing potassium carbonate, 1.1 Gm. to each 100 Gm. and alcohol, 3.88 per cent. Maltine Co., Brooklyn, N. Y. (Jour. A. M. A., Oct. 24, 1914, p. 1479).

Acne Vaccine.—Marketed in packages of six syringes each containing 12 million bacteria. Greeley Laboratories, Inc., Boston.

Acne Vaccine.—Marketed in packages of four syringes containing, respectively, 10, 20, and 40 million killed acne bacilli Schieffelin and Co., New York.

Colon Vaccine.—Marketed in packages of six syringes each containing 1 000 million bacteria. Greeley Laboratories, Inc., Boston.

Colon Vaccine.—Marketed in packages of two vials each containing, respectively, 50, 100, 200, and 400 million killed bacteria. Schieffelin and Co., New York.

Pyocyaneus Vaccine. — Marketed in packages of six syringes each containing 1,000 million bacteria. Greeley Laboratories, Inc., Boston.

Pyocyano-Bacterin.—Marketed in packages of four syringes containing respectively, 50, 100, 200 and 400 million killed bacteria. H. K. Mulford Co., Philadelphia,

Pa. (Jour. A. M. A., Oct. 24, 1914, p. 1479).

Antimeningococcus Serum (Antimeningitis Serum).—Marketed in one aseptic glass cylinder containing 30 Cc. with special sterile needle and stylet. Also in one 20 Cc. vial. Schieffelin and Co., New York,

Gonococcus Vaccine.—Marketed in packages of six syringes each containing 500 million bacteria. Greeley Laboratories, Inc., Boston.

Gonococcus Vaccine, Polyvalent.—Marketed in separate syringe packages containing, respectively, 50, 10, 200, 300 and 1,200 million killed bacteria. Schieffelin and Co., New York.

Pneumococcus Vaccine.—Marketed in packages of six syringes each containing 50 million bacteria. Greeley Laboratories, Inc., Boston.

Staphylococcus Albus Vaccine.—Marketed in packages of six syringes each containing 1,000 million bacteria. Greeley Laboratories, Inc., Boston.

Staphylicoccus Aureus Vaccine:—Marketed in packages of six syringes each containing 1,000 million bacteria. Greeley Laboratories, Inc., Boston.

Strepto-Bacterin (Human) Polyvalent.— Marketed in packages of six ampoules each containing 100 million killed bacteria; also in packages of six ampoules each containing 200 million killed bacteria. The Abbott Alkaloidal Co., Chicago.

Streptococcus Vaccine.—Marketed in packages of six syringes each containing 500 million bacteria. Greeley Laboratories, Inc., Boston.

Scarlet Fever Treatment.—Marketed in packages of four vials containing respectively 50, 100, 200, and 400 million killed bacteria.

Typhoid Bacillus Vaccine.—Marketed in packages of six syringes, each containing 1,000 million bacteria; also in packages of six syringes containing respectively 100. 200, 400, 600, 800 and 1,000 million bac-

teria. Greeley Laboratories, Inc., Boston. (Jour. A. M. A., Oct. 31, 1914, p. 1577).

PROPAGANDA FOR REFORM.

Serobacterins.-While objection may be made to the sensitized living bacteria used by Besredka because there is always an uncertainty as to the action of living bacteria in the animal body, such danger cannot be attributed to the "serobacterins" because they contain dead bacteria, and so far as known, can do no more harm than other dead bacteria-in fact it is claimed that they are preferable to other vaccines because the toxic products of the bacteria, other than the immunized properties, have been largely removed. It must be said, however, that these preparations are still in the experimental stage. In great part, careful clinical observations will decide that the serobacterins are really superior to ordinary vaccines. (Jour. A. M. A., Oct. 3, 1914, p. 1223).

Lactic Acid Ferments.—There is a large amount of literature to the effect that the Bacillus bulgaricus hinders putrefaction in the intestinal canal. While there may be some question as to a greater success in securing the implanation of this bacillus by administering it in "liquid cultures" the report of the Council on Pharmacy and Chemistry shows that such a culture is likely to reach the consumer in a more active state than one in the form of tablets. (Jour. A. M. A., Oct. 3, 1914, p. 1223).

Agar-Agar-Biscuits.—To make agar-agar biscuits it is only necessary to add finely powdered agar-agar to the flour used in making the biscuits. The amount should be, if possible, sufficient so that a dose of 5 Gm. will be contained in each biscuit. (Jour. A. M. A., Oct. 3, 1914, p. 12224).

Action of Sodium Cacodylate.—Containing its arsenic in organic combination and in the pentavalent state, which becomes therapeutically active only as it is re-

duced to the trivalent inorganic state, sodium cacodylate is so slightly toxic that therapeutic doses do not give rise to toxic symptoms. There is nothing in the literature to show that sodum cacodylate has a special action on the eye and blindness from its administration need not be feared. (Jour. A. M. A., Oct. 3, 1914, p. 1223).

Glycothymoline Refused Recognition .-A report of the County on Pharmacy and Chemistry cites Glycothymoline as a typical illustration of a "patent medicine" advertised to the public through the doctor. Different formulas have been ascribed to Glycothymoline by its promoters from time to time-but whatever the exact composition of this secret nostrum may be, it has been definitely shown that it is but a weak antiseptic solution. Nevertheless, the advertising circulars recommend the use of Glycothymoline in such serious conditions as diphtheria and ophthalmia of the newborn. Glycothymoline is in conflict with Rules 1 and 4 of the Council on Pharmacy and Chemistry, because of its indefinite composition and the method of advertising it to the public. It is in conflict with Rules 10, 6 and 8, in that it is an unscientific, shot-gun mixture sold under unwarranted therapeutic claims and under a misleading names. (Jour. A. M. A., Oct. 10, 1914, p. 1313).

Glycothymoline not Harmless. Glycothymoline is a mild antiseptic practically devoid of germicidal power and when used as a simple mouth wash is practically harmless. However, the recommendations to the public for its use in serious diseases make it a menace to the public health—and physicians are responsible for its wide spread use. (Jour. A. M. A., Oct. 10, 1914, p. 1304).

Declared Misbranded.—The Federal authorities have secured convictions under the Food and Drugs Act against the following "patent" medicines: Nutrio, West Baden Sprudel Water, Radam's Microbe Killer, Dr. Hilton's Specific No. 3, Dr. Sul-

livan's Sure Solvent, Russell's White Drops. With the exception of the first two the products were declared misbranded, chiefly because false and fraudulent therapeutic claims were made for them. Nutrio was declared misbranded because false statements in regard to the ingredients were made and West Baden Sprudel Water because it was not a natural water as climed. (Jour. A. M. A., Oct. 17, 1914, p. 1408 and 1409).

Phenolax Wafers.—These are tablets sand to contain phenalphthalein 1 gr., "aromatics" and sugar enough to make five grains. It is a question what purpose the "aromatics" and sugar serve, perhaps these are to mislead the unthinking to believe that this combination has some mysterious value over phenolphthalein itself. (Jour. A. M. A., Oct. 17, 1914, p. 1410).

Papine (Battle and Co.).—This is a simple aqueous alcholic solution of morphin, 1 grain to each ounce. It is exploited under the utterly unwarranted claim that it does not nauseate, constipate nor create a habit. (Jour. A. M. A., Oct. 17, 1914, p. 1411).

Celerina and Aletris Cordial (Rio Cremical Co.).—Celerina is a shot-gun mixture said to contain, in addition to 42 per cent. of alcohol, kola, viburnum, celery, cypripedium, xanthaxylum and aromatics. Aletris Cordial is said to contain 28 per cent. alcohol (more than is found in wine) besides three obsolete and valueless drugs, aletris, helonias and scrophularia. Whatever virtue there is in Celerina and Aletris Cordial is derived from the alcohol. (Jour. A. M. A., Oct. 17, 1913, p. 1411).

Use of Paraffin Oil.—While it is recognized that cancer may be caused by chronic irritation, the paraffin oil used medicinally is bland and non-irritating and there is no reason to suppose that its continued use would cause cancer. A good quality of oil may be obtained by prescribing Paraffinum Liquidum or Petrolatum Liquidum Grave. (Jour. A. M. A., Oct. 17, 1914, p. 1411).

Hemo .- The Thompson Malted Food Company, Waukesha, Wis., which sells Hemo, Malted Milk and Malted Beef Peptone, offers its stock to physicians with promises of large profits. Hemo is advertised as "the food that builds up weak stomachs" and is stated to contain "the iron of spinach, the juices of prime beef, the tonic properties of selected malt in powdered form and the richest sweet milk." Hemo is "promoted" by absurdly extravagant claims and psuedo-scientific nonsense. Disregarding the question whether or not this is a stock jobbing scheme or whether the purchase of the stock is a good investment, physicians who buy the stock and prescribe the firm's output are not giving their patients a square deal. (Jour. A. M. A., Oct. 24, 1914, p. 1494).

Gingseng.—Despite the fact that the peculiar man-shaped root of gingseng has no medicinal value so far as science can determine, the Koreans for decades paid their tribute to China in gingseng. In China it is reported as a cure for all ills that flesh is heir to and has a special reputation as an aphrodisiac. Perhaps there is no better illustration of the virtues of aphrodisiacs in general than the fact that the Chinese are quite sure of the marvelous efficacy of ginseng, though no evidence of its virtues can be obtained in the West. (Jour. A. M. A., Oct. 24, 1914, p. 1486).

Book Reviews

CLINICAL HEMATOLOGY.

Clinical Hematology: An Introduction to the Clinical Study of the So-Called Blood Diseases and of Allied Disorders. By Gordon R. Ward, M. D., Fellow of the Royal Society of Medicine, Medical Society of London, etc. Octavo of 394 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$3.50 net.

Doctor Ward's book is "primarily concerned with that clinical study of the so-called blood diseases which has been so much overshadowed by exclusively pathological investigation. It is secondarily concerned with the classification of blood diseases, inasmuch as this is a necessary preliminary to any understanding of their nature."

This book comes as a timely contribution to a little known study and will be found of great practical value by the practitioner. The general considerations and classifications are made the subject of the first few chapters after which the author discusses each of the blood diseases in a separate chapter, grouping those that have similar characteristics. A special chapter is devoted to the blood in surgical diagnosis while methods of treatment are given consideration in a special chapter.

The entire work shows a careful study of the various conditions of which it treats and is worthy of the attention of the profession.

A TEXT-BOOK OF MEDICAL DIAGNOSIS.

A Text-Book of Medical Diagnosis. By James M. Anders, M. D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College of Philadelphia, and L. Napoleon Boston, M. D., Professor of Physical Diagnosis, Medico-Chirurgical College, Philadelphia. Second edition thoroughly revised. Octavo of 1248 pages, 500 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

This excellent work needs no introduction to the medical men in America. The authors are well known as thoroughly practical scientific men and in this edition they have made a most complete revision of the original publication bringing the book to date in the detail of all methods of

medical diagnosis. To those of our readers who have not this work in their libraries we can heartily recommend it, for it will be found of value in the routine work of diagnosis in almost every case.

The Clinics of John B. Murphy, M. D., Volume III., Numnber V.

THE CLINICS OF JOHN B. MURPHY, M. D., at Mercy Hospital, Chicago. Volume III., Number V. Octavo of 190 pages, 61 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Published bi-monthly. Price per year: Paper, \$8.00; Cloth, \$12.00.

The October number of Murphy's Clinics contains the usual number of good things, beginning with the interesting and instructive clinical talks on surgical and general diagnosis by Doctor Murphy. Doctor Mix contributes a most entertaining lecture on meningitis with a differentiation of its varieties.

As we have said before, no one can afford to be without Murphy's clinics as each number is full of practical points. This series has demonstrated its practical value from the very first number and the profession is to be congratulated that they continue to appear regularly.

Crile and Lower's Anoci-Association.

ANOCI-ASSOCIATION. By George W. Crile, M. D., Professor of Surgery, School of Medicine, Western Reserve University, Cleveland; and William E. Lower, M. D., Associate Professor of Genito-Urinary Surgery, School of Medicine, Western Reserve University, Cleveland. Octavo of 259 pages, with original illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$3.00 net.

The work of Crile on shock is too well known to need detailed mention. In this book the authors have outlined definitely and plainly their views and the practical application of these principles to surgical procedure.

Part one is devoted to a discussion of the Kinetic Theory of Shock and Anoci-Association, while part two discusses the Treatment of Shock and its Prevention through Anoci-Association.

The kinetic theory of shock has been well discussed in medical journals throughout the past year and it is useless for the reviewer, in the brief space given to this review, to attempt to intelligently place them before the reader. One must study them oneself and we most respectfully recommend this splendid monograph to our readers.

THE CLINICAL SIGNIFICANCE OF PURE ETHER.

The chief objection to sulphuric ether is the nausea which frequently persists for days after its inhalation. Pure ether under tests shows absence of organic impurities; absence of residue or foreign odor on evaporation; freedom from acidity. Acetaldehyde and peroxide are not uncommon impurities of commercial ether offered for anaesthesia.

An ether that is free from the objections noted is being marketed by Parke, Davis & Co. This ether is negative to both acetal-dehyde and peroxide tests, and when evaporated from glass, sterile gauze, or a clean blotter, leaves neither residue nor odor. The container in which it is supplied is

worthy of special mention. It is a hermetically sealed package that enables the physician to administer the anaesthetic by the drop method. The dropper feature consists of a piece of thin capillary tubing which enters the top of the can at diametrically opposite points in the form of a semicircle. To prepare it for use the physician or his assistant cuts the tube with a knife and bends the two pieces apart, curving them over the adjacent edges of the On tipping the can, air enters one tube as the ether flows from the other. Any ether remaining in the container may be preserved for future use by pinching the ends of the tubes with forceps or otherwise; hence there is no waste, such as often attends the use of the ordinary ether can.

(Adv.)

The New Mexico Medical Iournal

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No. 3

$E \cdot D \cdot I \cdot T \cdot O \cdot R \cdot I \cdot A \cdot L$

THE NEW MEXICO MEDICAL JOURNAL WISHES ALL ITS READERS A MERRY CHRISTMAS AND A HAPPY NEW YEAR.

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

You want a larger and better journal
You can have it by wkin.
ING OUR ADVERTISERS: "I
SAW YOUR AD. IN OUR STATE
JOURNAL."

FAVOR THOSE WHO FAVOR US

The secretary desires to call the attention of the county secretaries to the fact that the 1915 dues will become due and payable on January First, 1915.

The earlier these dues are reported the easier will be the work of each county secretary. Forms for reports will be mailed to each county secretary in time to have the report ready early in January.

OUR KNOWLEDGE OF CANCER.

It is a curious trait of human psychology that while we accept with thanks a caution against slippery ice, a racing automobile, an ocean swim, and many hazards well known to involve mortal risk, custom and only custom rules against attentions to the early signs of cancer. It is therefore the purpose and earnest endeavor of the American Society for the Control of Cancer and all who are engaged in the campaign against malignant disease to modernize custom in this respect and to establish a premium on that wary intelligence which will permit an edu-

cated man or woman to recognize the approach of danger and take the saving steps in time. Dr. Alfred Russell Wallace once said that the nineteenth century had done more than all previous time in the pursuit of knowledge essential to human welfare and had done less than any other time to make that knowledge available for human needs. The twentieth century begins with far more deliberate attention to this need. Intelligent people everywhere and especially in America are more and more inclined to apply the standard of utility to the products of science. In choosing among the lines of scientific endeavor we ask and demand that their relation to human welfare should be prominently considered.

Not long ago an eminent association of specialists in cancer research publicly stated its belief that the new and old knowledge of this disease is not effectively employed and that it is not necessary to know all about the nature and causes of cancer in order to limit its mortality. These scientists before turning back to their laboratories to delve deeper into the mysteries of malignant disease, did not fail to discharge their immediate responsibility to the cause of human welfare. With

whatever influence they possessed they urged the need of a country wide etfort to disseminate the present knowledge of cancer both in the medical profession and among the people generally. This call was characterized by a tacit assurance to medical and lay enthusiasts that we are not about to witness the miracle of a universal cure for advanced cancer but may accomplish almost as much through prevention and through early diagnosis and treatment. The society subsequently organized to carry on this campaign believes that every man and woman should be acquainted with the early signs of preventable and curable cancer, and that this knowledge when fully disseminated will very greatly reduce the number of deaths and the number of advanced cases.

There is much about cancer that is obscure. We do not know why the rebellious tissue cells grow wild and destroy their host. We may never know. Neither do we know the cause of gravitation or chemical affinity. These are ultimate facts about Nature that are inaccessible to solution, but this ignorance does not prevent us from making considerable use of gravity and chemistry. What we do know about cancer are the conditions leading up to it and the proper use of this knowledge by the individual will very largely protect him. This knowledge is a very small part of the subject but it is sufficient for the present to accomplish great results.

The fact of the greatest practical importance in our present knowledge of cancer is that the disease in its early stages is purely local and can be successfully removed from the system by surgical means. In the second place

we know that irritation in many different ways plays a most important part in the development of the various forms of cancer. This knowledge gives an important direction, to efforts toward prevention and cure. The sources of constant irritation to any part of the body should be removed.

In external cancer there is something to be seen or felt, such as a wart, a mole, a lump or scab, or an unhealed wound or sore. Pain is rarely present. Cancer inside the body is often recognized by symptoms before a lump can be seen or felt. Continuing indigestion, with loss of weight and change of color, is especially suspicious. Persistent abnormal discharge should arouse suspicion of cancer, particularly if the discharge is bloody. The early and hopeful stages of cancer are usually painless.

Knowledge of cancer is truly the power to save life. If all patients would seek examination and competent advice immediately on the appearance of signs suggesting cancer and would submit to the simple and certain operation which is sufficient at that stage to remove the disease, the number of cures would be enormously increased. Alert intelligence and courage replacing present ignorance and fear would save the majority of sufferers from cancer.

TYPHOID EPIDEMIC.

A typhoid epidemic of ninety-three cases in the city of Hanford, Cal., is reported by W. A. Sawyer, Berkeley, Cal., in a recent issue of *The Journal of the American Medical Association*. All the cases could be traced to a church dinner, and the infection came from a typhoid carrier among those

who prepared and served the food, a woman who did not know that she had had typhoid. The history is interesting. The infection was conveved in a dish of Spanish spaghetti. Only those partaking of it were primarily affected and only one secondary case was reported, but this was apparently not positively traced to this source. ver sums up his conclusions as follows: "The source of infection in the ninety-three cases of typhoid fever in the Hanford epidemic was a typhoid carrier who prepared food served at a public dinner. The vehicle of the infection was a large pan of Spanish spaghetti prepared by the carrier. This dish was baked after it had been infected, but this baking was shown by laboratory experiments to have developed the bacteria instead of sterilizing the food. Certain customary methods of cooking are thus shown to be inadequate as a protection against infection. The incubation period in the majority of the cases in this epidemic of typhoid fever proved to be shorter than the time usually regarded as the minimum. The first case developed three days More cases showed after infection. their first definite symptoms six days after the infected food was eaten than on any other one day. The ways in which a carrier may transmit infection are so varied and so numerous that attempts at the control of mere channels of infection will not offer sufficient protection. Those who were suspicious of the raw salad at the dinner at Hanford and ate the freshly baked spaghetti turned from a safe dish to one which was heavily infected. The best protection against carriers will come through thorough investigation of the source of infection in every case of

typhoid fever. When carriers are discovered, they can be advised and controlled. Until there are more trained epidemiologists on a full-time basis among state and local health officials, the danger from carriers will not be noticeably diminished, and the individual will find in antityphoid vaccine his best protection against infection from carriers."

UNWRAPPED BREAD.

The increasing displacement in this country of home-made bread by the bakery loaf has been accompanied by a growing attention to the sanitary aspects of the baking industry. Attempts, in large part suscessful, have been made to improve the conditions under which bread is prepared in city bakeries. It is evident, however, that the conditions of distribution as well as of preparation need to be safeguarded. We have already commented on the possible dangers of bacterial contamination of bread through handling by typhoid or other disease carriers. Recent studies have added to the evidence we surveyed at that time. In a paper by Jacobs, LeClerc and Mason of the United States Department of Agriculture it is shown that the surface of wrapped bread purchased from retail markets is more nearly free from organisms than unwrapped bread obtained at the same time from the same sources: Bacillus coli was found more than eight times as frequently in the unwrapped loaves. This result is substantially the same as that obtained by Katherine Howell on which our previous discussion of this subject was based. Curiously enough, these later writers made no reference to Miss Howell's work. With respect to the effect of wrapping on the palatability and general quality of bread, the conclusions of Jacobs, LeClerc and Mason are generally favorable. They state that, while bread as it comes from the oven has a sterile crust, it may become contaminated with organisms while cooling in the laboratory and therefore should be wrapped as soon as it is sufficiently cooled, a period which they fix at approximately three hours. their discussion, however, these writers do not sufficiently discriminate between the sanitary importance of organisms such as molds or harmless air bacteria, and definite pathogenic microbes that may be smeared on the bread from infected hands. tion of the bread from contact with fingers or mouth spray is much more essential than protection from ordinary dust. The fact that "bread which was cooled only one hour before wrapping retained heat and moisture enough to favor the growth of certain organisms" does not necessarily mean that a higher degree of safety is obtained if wrapping is delayed for two hours longer, and the authors would probably not wish such a conclusion to be drawn from their work. One practical point brought out in this paper deserves especial mention, namely, that unwrapped bread becomes stale noticeably sooner than wrapped bread and that the gain to the baker by wrapping undoubtedly more than balances the extra cost. Of great economic importance—when we consider bread, economy is important —is the reduction in weight of the wrapped loaf as compared with the unwrapped. A conference with a number of bakers showed that the cost of wrapping is from 4 to 5 per cent. On the other hand, the reduction in weighto f wrapped loaves varied from 7.5 to 14 per cent. The consumer can be expected to bear at least half the cost of wrapping, or 3 per cent, but he should not be compelled to pay all of it, including a profit. A similar, but less comprehensive, study made by the Research Laboratory of the New York City Health Department has also been reported recently, and this also confirms the results of Miss Howell respecting the bacterial superiority of wrapped loaves. We may consider it as established, says The Journal of the American Medical Association, that the distribution of unwrapped bread offers manifold possibilities of infection, and that the use of wrapped bread not only offers some safeguard against disease transmission, but entails no economical disadvantage.

PYORRHOEA AVEOLARIS.

The subject of pyorrhoea alveolaris should be of more than passing interest to general practitioners on account of its dependence upon, or causation or aggravation of, digestive diseases. Considerable interest has recently been aroused by the finding of amoebae in the discharge from the gums and sockets in these cases, on account of their possible etiological relationship. This is very important for, if true, it offers a means of cure in obstinate cases where no serious permanent damage has been done, and should give very good results in mild cases. Several observers report the finding of amoebae in nearly all cases of pyorrhoea. As suggested by the above finding emetine, the active principle of ipecac, has been used both locally and systematically with, it is claimed, satisfactory results.

If it be true that the disease is caused by the amoebae and is curable by the proper use of emetine, it is an important stride in advance, and one which can be widely used.

The technique for examining the discharge for amoebae is as follows: Insert a sterile platinum loop into the pocket between the tooth and gum, withdraw some of the discharge, and stir it into a drop of normal salt solution on a warm slide, cover with a warm cover glass, and examine immediately while warm. The amoebae vary in size from that of a leucocyte to two or three times as large, and the characteristic movement is active when examined fresh and warm. The writer has found them in all cases examined for them to date, and also in the discharge adhering to an old carious root.

We suggest that you look for the amoebae in your cases of pyorrhoea and, when possible, treat them locally and systematically with emetine, and report the results in this Journal.

REFERENCES.

Dental Cosmos. Sept., 1914. Page 1082, editorial, Baccal Protozoa.

Ibid. Page 1089. Review of article by Dr. A. Chiavaro, "Researches upon the Endamoeba Buccalis."

Dental Cosmos. August, 1914. Page 948. "The Protozoa of the Mouth in Relation to Pyorrhoea Alveolaris," by M. T. Barrett, D. D. S.

New Orkans Medical and Surgical Journal, Nov., 1914 "The Specific Cause and Prompt Specific Cure of Pyorrhoea Alveolaris or Rigg's Disease," by C. C. Bass and F. M. Johns. Journal A. M. A. Nov. 14, 1914. "The Tonsils as a Habitat of Oral Endamebas," by A. J. Smith, W. S. Middleton and M. T. Barrett.

E. C. P. '

East Las Vegas, N. M., Nov. 24, 1914.

Dr. R. E. McBride, Editor

Journal of New Mexico Medical Society, Las Cruces, N. M.

Dear Doctor.—The following licenses were granted at the last meeting of the Board of Health and Medical Examiners, October 12, and 13. All upon credentials:

George A. Miller, graduate of University Medical College, Kansas City, Mo., 1911.

Mason E. Henry, Vanderbilt University, 1912.

Roy Edgar Davis, Barnes Medical, 1899. Henry W. Gibbs, Washington University, St. Louis, 1909.

Louis A. Pulley, University of Illinois, 1910.

Lotan C. Read, Coll. of Med. and Surg., Cincinnati, 1884.

Ida A. Hall, Coll. of Phys. and Surg., Kansas City, Kan., 1898.

Nadir Zeinum, Syrian Protestant Coll. Beirut, 1912.

Simon S. Foster, Univ. of Tennessee, 1911. Ernest A. Duncan, Western Reserve University, 1909.

Moses B. Barber, Barnes Medical, 1899. Chas. C. Pierson, Univ. of Louisville, 1907. Frederick A. Tower, Vanderbilt, Univsity, 1909

Yours,

W. E. KASER, Secretary.

COUNTY SOCIETY NOTES.

The regular meeting of the McKinley County Medical Society was held at Dr. Handy's office December 4. The meeting assembled at 8 o'clock p. m. and repaired to Hotel Delmar where a sumptuous banquet was in waiting, to which we did ample justice, after which returned to aforesaid office where the session was held.

On Clinical Cases Dr. Willson reported a very interesting case of Trephining. Several others presented cases of little, if any, less interest.

Dr. Hutchinson then presented a paper entitled "Why Every Physician Should Join the County Medical Society." The paper was well received and highly complimented.

Following this occured the annual election of officers, which resulted as follows: President, H. G. Willson; Vice President, Dr. Stoeffer; Secretary, Dr. Hutchinson; Treasurer, Dr. J. M. Boyle; Delegate to State Meeting, Dr. A. H. DeLong; Censor for Three Years, Dr. Wm. E. Handy; Censor to fill out unexpired term of Dr. Moore, Dr. A. H. Schermann.

Motion carried to send a short statement of this meeting to the State Medical Journal.

Motion prevailed that the Society extend a vote of thanks to the retiring President for the able and courteous manner in which he has conducted the Society during his term of office.

Announcement was made that Dr. Willson would present a paper at our next meeting. Motion to adjourn prevailed

A. H. DeLONG, Secretary.

Original Articles

OBSERVATIONS OF A COUNTRY PHYSICIAN.

J. W. Laws, M. D. Lincoln, N. M.

(Read before the 33rd Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., Oct. 5-7, 1914).

Few physicians of the city, who have consultants, nurses, hospitals and a well equipped laboratory near at hand, realize the difficulties and responsibilities under which the doctor in some country districts labors.

In cases of pneumonia, typhoid fever and acute infectious diseases, where nursing is of greater importance than the giving of drugs at certain hourly intervals, the hiring of a trained nurse involves an expense of ready money that only a few will agree to pay.

The country physician meets acute operative conditions, in some of which time and the finances of the patient will permit of transference to the hospital; but occasionally it falls to his lot of necessity to treat serious illness or to operate, where the life of the patient depends upon his nerve, sound judgment, and resourcefulness, to do what it is best under the most adverse circumstances.

The following cases, while they have some points of medical and surgical interest, are described in a manner to show the difficulties and responsibilities that are occasionally thrust upon the country physician without warning.

Case I. Willie C., age 18, and his brother, J. Z. C., age 15, returning home from school about 4 o'clock one afternoon, came to where some neighbors had cleaned out an irrigation ditch. Noticing some parsnip shaped roots that had been spaded up, which the took to be wild "artichokes," they peeled and ate a piece of one of the roots, finding it somewhat sweetish and spicy to the taste. Two or three hours later, returning from a call, the writer was hailed by excited friends and neighbors of the boys and asked to go to their house as quickly as possible, that one of the boys was dying and that the other was not expected to live, that both boys had been poisoned by wild parsnip. Wondering what the particular poison and alkaloid of the plant could be, and knowing that the stomach tube was fifteen miles away, at the office, in a certain red box, the writer put on extra speed, dashed across pole bridges and rock slides, splashed across the ford of the river, sputtered through an overflowing irrigation ditch, and finally arrived at the home of Mr. C. with a great show of promptness and efficiency. The mother was screaming hysterically, the children were crying, and the house and yard full of excited friends and neighbors.

The oldest boy, Willie, was apparently dying. His pupils were dilated, respiration shallow and irregular, parsnip odor on breath and foamy saliva on lips, cold perspiration on brow, no radial pulse could be felt but hand over heart revealed that it was beating about forty times per minute. Father stated that Willie had had two convulsions prior to becoming unconscious. With

hypodermic syringe in hand thought of convulsions and decided that strychnine might be risky, with patient unconsious and pulseless, hesitated to give apomorphine on account of depressing effect upon heart, looked at dilated pupils and feared to give atropine—nitroglycerine and stomach tube were not available. Father and friends were anxious that something be done quickly. It requires more nerve in a case of this kind not to give something that may lessen the chances of recovery, than to respond to the demands of anxious relatives that something be done.

Whiskey, being at hand, about two ounces were injected beneath skin, and with hand over heart, cautiously began the administration of ether by inhalation. Heart and respiration seemed to steady under the ether and there was no return of convulsions, so that the inhalation of ether in small amounts was kept up for something over two hours, until a return of the radial pulse could be detected, when it was left off. The patient began to show signs of restlessness, finally asked to raise up, said that he was blind, and that he was nauseated and soon after vomited a foamy material very strong with parsnip odor. Patient was made to drink warm salt water, until stomach - s well washed out. Then he was given one-third of a tumbler of whiskey. In the mean time the younger boy, being conscious, was taken in hand by anxious neighbors and made to vomit. One-third of a tumbler of whiskey was given him by the mouth. Neither boy became intoxicated from the amount of whiskey administered. Both cases recovered, but despite the fact that large doses of calomel were given both boys, and a dose of croton-oil, two drops, to the older boy, it was imposible to obtain a bowel movement for twenty-four hours.

A root of this so-called wild parsnip was sent to the Hygienic Laboratory of Washington, D. C., for identification and if necessary for analysis to be made. The plant proved to be Water Hemlock, a deadly poison both to animals and people; emptying of the stomach and the administration of morphine or chloral was suggested. In the cases of poisoning the writer has seen from this plant, neither the morphine nor the chloral were indicated.

This plant is known by the Mexicans as Yerba Peco or Yerba de Peco.

Several old time citizens are willing to vouch for the truthfulness of the following story: Some Mexicans working in a ditch spaded up some of this plant and began to argue whether or not it was poisonous. One Mexican stated that he was not afraid to eat it and on a wager of five dollars ate some of the plant and died in the ditch.

In the 19th Edition of the U.S. Dispensatory, the following is found: "Cicuta Maculata; American Water Hemlock, Musquash Root, Beaver Poison, Spotted Cowbane grows in meadows and on the border of streams throughout the U.S. and is closely analagous in botanical character and effects to the European species. several instances children have been poisoned by eating its root. This consists of several fleshy tubers, spreading out from the base of the stem, having an odor and taste not unlike the parsnip." "Treatment consists in emptying the stomach by emetics or stomach tube and treating symptoms as they arise."

In communities where irrigation is

done, children should be made acquainted with the poisonous nature of this plant and told what to do in case of poisoning.

Case 2. Old Uncle Thomas Hwhite, age 70, Justice of the Peace, Notary Public, School Director, Postmaster, and Midwife of the little mountain village of ----, was returning from the county seat slightly intoxicated late one afternoon. Nearing his home, his nag responded to his mental exuberance, overturned the light buggy, throwing Old Uncle Tom on his left hip, injuring it. An hour later returning from a call and passing through the village, I was called and found the patient suffering from pain in left hip. A hypo of morphine and hyocine was given, found that there was no dislocation, but could not detect any crepitus. People, however, were told that probably there was a fracture, of the neck head of the femur. Sand bags were applied to the sides of the leg and weight applied to foot and people were told to keep me posted by telephone as to Uncle Tom's condition. Over two hours was lost on this call visit and still the writer had to travel twenty-five miles to reach home. Nothing more was heard from Uncle Tom, until considerable time had elapsed, and a bill was sent in for the modest sum of ten dollars, when there was a prompt response, stating that bill was exorbitant and would not be paid and that there was three inches shortening of the leg.

About one year later, about ten o'clock at night, a young Dr. S. telephoned, stating that he had a case of strangulated hernia in the person of Uncle Thomas H, that reduction under anaesthetic had been impossible and that there was stercoracious vomiting.

Notwithstanding the natural inclination to send word to Uncle Tom to go straight to a certain hot place, beginning with a capital H., Dr. S. was informed that under the circumstances help could not be refused a brother physician. A twenty-five mile trip at night over mountain roads, an operation on an old man addicted to drink, in a two room log house, with no skilled assistance, was not a very cheerful prospect: nevertheless duty called. A folding operating table, and a suitcase of sterilized dressings, kept in readiness for such emergencies, were loaeded in and Uncle Tom's bedside reached about 1 o'clock at night. Neighbors rustled a large store lamp and managed to fasten it to the building paper covered ceiling. Instruments were boiled over a small cook stove, Dr. S. gave the anaesthetic, and with the assistance of a medical student the writer began dissection over inguinal hernia. On opening hernial sack the strangulated loop of intestines was black and the hernial sack filled with prune-colored fluid. Having relieved the constricting ring with successive nicks of the bistoury, hot towels were applied to the strangulated loop for a few minutes and perceiving a slight return of color, resection was considered unnecessary and the loop of intestines was returned to the abdomen. While dissecting out a portion of the hernial sack, Dr. S. became more interested in the operation than in noticing the anaesthetic and Old Tom stopped breathing.

This necessitated in lowering the patient's head and in the operator performing artificial respiration. While performing artificial respiration, the wife and friends entered, took one look and left with loud lamentations. Finally

respiration was restored, but the chain of asepsis attempted was broken. Fortunately an extra pair of gloves had been boiled and were available, so that operation for radial cure of hernia was finally completed, sewing tissues layer by layer, closing without drainage. Patient was returned to bed. He soon began to come out from under the anaesthetic. Wife and friends entered the room with renewed hope, to let out one wild shriek that the house was on fire, the heat of the lamp having set fire to the building paper of the ceiling. Despite the fact that Uncle Tom was instructed to remain in bed for at least ten days, Dr. S. found him sitting on the door step of his cabin on the third day. However, union was perfect and cure of hernia absolute.

The country physician has a wide field of usefulness. Of all places where there is ignorance of the sanitary measures of ordinary cleanliness, it is in the ordinary country home, and but for the pure air and wonderful vitality and resisting power of the people, the situation would be discouraging.

The country physician of today, has in most instances, a well organized County and State Medical Society, for study and new inspiration, and his standard of efficiency is being yearly raised. The physicians of the town and city, who are specializing on internal medicine and surgery, do well to keep in touch with the country physicians adjacent to them; and the country physician in turn should know personally the physicians doing special work in towns and cities nearest to them that have a hospital or hospitals. From these men who specialize, the country physician learns to detect the early symptoms of grave diseases that

otherwise would have been overlooked. The country physician who refers his patient to his nearest specialist, keeps in touch with his patient's condition and thereby learns invaluable lessons. The writer recalls one case of appendicitis, sent to the city to be operated between attacks, that fell into the hands of so-called specialists, was fleeced, and later he had to operate at patient's home during an attack. He recalls another case that was being treated by a specialist who was perfectly reliable and competent, where the patient left and made quite a considerable trip to find out whether or not the specialist was not holding him, unduly long for pecuniary reasons. The patient ascertaining that the condition treated required time, patience and the constant observation of the specialist, the gentleman returned to specialist perfectly satisfied to continue treatment. So I would emphasize the importance of a closer relationship between the knen specializing and the family physician.

The country physician of today as of old, is a great factor for good, and thanks to the telephones, improved road conditions and the automobile, his position is being raised to a higher plane of efficiency and usefulness.

INFECTION WITH THE CERCOMONA HOMINIS.

Elliott C. Prentiss, B. S., M. D. El Paso, Texas.

(Read before the 33rd Annual Meeting of the New Mexico Medical So-

ciety, Albuquerque, New Mexico, Oct. 5-7, 1914).

Since the acquisition by the United States of territory in tropical lands the study of tropical diseases has been very much stimulated among our physicians. Such diseases have been found to be much more prevalent here than was formerly supposed. Infection of all tissues with animal parasites plays a very important role in diseases of the tropics, and protozoal infection of the digestive organs forms a very important subdivision of that. Protozoal organisms capable of infecting the human body are numerous, the amoebae being among the most important. In addition to having seen a number of cases of amoebic dysentery in this region, I have had some that were apparently due to the cercomona hominis or intestinalis, a small flagellate organ-

Morphology.

Calkins (1) brings the classification of the protozoa down to the genus cercomona as follows:

"Subphylum. Mastigophora. Protozoa in which the kinoplasm is concentrated in the form of one or more vibratile or undulating motile processes, called flagella, or in a kinetonucleus which may lie inside or outside of the trophonucleus. Simplest forms closely relate to bacteria.

"Class I. Zoomastigophora. Flagellated forms in which animal characteristics are predominant.

"Subclass. Lissoflagellata. "Smooth" flagellates, i. e., without protoplasmic collars.

"Order II. Monadida. Organisms of simple structure, the body being often plastic or even amoeboid and with one or more flagella at one end (so-called "anterior" end); there is no distinct mouth opening, the food materials being ingested by a soft area of protoplasm at the base of the flagellum; in some cases the organisms are saprozoites.

"Family Cercomonadidæ: The organisms are fréquently plastic and changeable in form, but unable to form pseudopodia; there is but one flagellum with a flagellum fissure at the base; nutrition is holozoic, saprozoic, or parasitic.

"Typical genera; Cercomonas, Dujardin, 1841 (a very uncertain genus)."

The organisms seen in my cases were about as transparent as a hyaline cast, in dimension about 9 by 11 microns, in shape very much like a broad bluntly pointed boat, and corresponded with the illustrations given in Sahli's Diagnosis (2), except that the anterior end, that opposite the flagellum, was not sharply pointed, and I saw no nucleus or vacuoles. They varied in size, some being much larger than others. A few of the large ones, apparently the older, when they had quieted down sufficiently to be observed, had in the anterior portion of the body a bag, pouch or vacuole about one-half to one-third the size of the whole organism, containing granular material, which I presumed was made up of spores. spite of the tremendous numbers in which the organisms were present in some cases I did not see any in active division; reproduction is probably by spores. They are extremely active motilly, and dart rapidly through the liquid portion of the specimen, and wiggle between particles of fecal matter wherever there is the slightest room for them. I found them still motile 6 and 8 hours after having been passed, (on summer days), although their movement is then labored and sluggish.

The flagellum was about, or not quite, as long as the body of the cell, and was always single. Motility was imparted to the organism by a side to side movement of the flagellum, similar to that of a tadpole, and it was propelled in a direction opposite to the flagellum end, and it seems to me that the flagellum end on that account should be called posterior, instead of "anterior", as referred to by Calkins. As the organisms under observation on the slide became less motile and were apparently dying, the flagellum became shorter, and thicker at the base, the protoplasm of the cell evidently flowing into the flagellum, or rather the flagellum retracting into the cell, and when motionless there was no longer any flagellum present. I did not see any organisms with more than one flagellum. I fixed several slides and tried to stain them, but without suc-Castellani (3) stained them, using a modified Romanowsky method.

The illustrations given in the text-books and articles consulted are misleading and not uniform. Various sizes and shapes are shown, and there is variability as to the characters of the flagella. Some authors mention the finding of trichomonas in large numbers, but do not seem to have found the cercomonas. I have not found the trichomona intestinalis in a single case, and this has not been due to lack of care in the examination or to not knowing what they look like.

HABITAT:

They are found in the greatest numbers in the large intestine, although they probably occur also in the small intestine in smaller numbers. Some observers (4) report finding the flagellates in the stomach contents in cases of carcinoma, but I have not done so. They were found in the stomach in large numbers in one case of gastric ulcer (5) that had perforated and caused general peritonitis.

PATHOGENICITY.

It is the opinion of most physicians who have had experience in the tropics that the cermomona is harmless, and when present is of no clinical significance. There, are however, cases reported in which this organism was present in large numbers, resulting in recovery upon the expulsion of the parasite. Franchini (5) reports cases of severe anaemia cured by elimination of the cercomonas. Rosenbeck and Rohdenberg (6) report a case of chyluria containing the cercomona hominis. Castellani (3) reports some undoubted cases of diarrhoea due to flagellates. Sistrunk (7) found the cercomona 9 times in 145 patients examined for intestinal parasites, and referring to the protozoa states that "My own work has certainly strongly indicated the existence of such (pathogenic) properties"; the inference being that this opinion included the cercomonas. Dolley (8) reports a case of gangrene of the lung apparently due to the trichomona intestinalis, a closely related organism, and also supposed to be non-pathogenic. Numerous other articles mention the finding of cercomonas and trichomonas in the faeces in various conditions, but do not infer that they are an etiological factor.

When found in small numbers the cercomona is probably of no importance, and I have seen many such cases, but when it is present in large numbers,

I believe that it may aggravate an 'existing condition, and in some severe cases of acute and chronic diarrhoea that have come under my observation I am convinced that it was the sole cause. In the latter cases improvement and recovery accompanied the elimination of the cercomonas. The symptoms and stool examintions were usually suggestive of a severe catarrh rather than an ulceration, which latter would have been the case if the condition had been caused by the amoeba. No bacteriological examinations were made, but in a valuable article, Castellani (3) reports cases of flagellate diarrhoea in which such examinations were made and bacterial infection eliminated.

In these cases I examined both diarrheal stools and those resulting from a dose of salts, and in none of them did I find any amoebae, and if the condition had been due to the latter, I would no doubt have found them, in view of the severity of the symptoms.

Some physicians believe that the cercomona hominis cannot exist in the intestine in the absence of the amoeba histolytica, and that the finding of the former is evidence of the presence of the latter, even although it cannot be found. Cercomonas have been present in only two cases in which I found the amoeba histolytica, and I did not find the amoeba once in those severe cases which I felt sure were due to the cercomona, in spite of examining both liquid dejections and faeces following the administration of salts. The patients did not recover under the emetine treatment, but only improved, a far different result than would have occurred if the condition had been due to the amoeba histolytica (which was not found), with the cercomonas only incidental. If there be such dependence of the cercomona upon the amoeba histolytica, it is almost the only interdependence of organisms known in the whole field of medicine.

SYMPTOMS.

Of these cases of diarrhoea that seemed to me to be due to the cercomona some began mildly, with diarrhoea lasting a few days to a week, then a variable interval and recurrence; this continuing until the diarrhoea was constant and severe, with periods of only moderate improvement. Others began acutely and remained severe or moderately so, with only slight intervals of improvement.

None of them had pain in the stomach or apparent involvement of that organ. I did not make a gastric analysis in any of these severe cases of diarrhoea, as I did not see anything to be gained from it, so cannot say whether or not the cercomonas were present in the stomach. Loss of appetite was almost constant, sometimes even a mild repugnance for food, and there was generally a pressing desire to go to stool immediately after putting anything into the stomach.

Pain was not a prominent symptom, although in some cases it was marked. When slight it was usually localized over the sigmoid or caecum, or both; when moderate, here and also over the rest of the colon, and at times the ileum; and when severe, over the whole abdomen. One severe case had only slight tenderness just below the umbilicus. Several had occasional severe attacks of cramps, due to the formation of gas. There was seldom pain in the rectum, but two had excoriation of skin around the anus, due to the irritation of the liquid discharges.

The number of movements varied from 3 to 12 in the 24 hours, averaging about 7 or 8; some patients nad more during the night than in the day. The stools were liquid, or soft and mushy, with frequently a peculiar sourish-foul odor; at times the odor was very slight. Mucus was always present, in some cases in numerous small pieces, or in large firm gelatinous masses, in others in all variations between these. Streaks of blood were rarely seen and there were no hemorrhages from the bowels.

On microscopical examination the mucus as a rule did not contain many epithelial cells, and generally only a few leucocytes, but in two cases both were numerous. Red blood cells were usually absent, but were occasionally present in small numbers, and in two were numerous.

The cercomonas were present in enormous numbers, both in the mucus and in the liquid portion of the faeces; sometimes the whole microscopical field seemed alive with them.

There was loss of weight and strength, which with anaemia became marked in those cases that had lasted some time. In several of these cases it was noticed that upon recovery the patient did not pick up in weight and strength satisfactorily, and there was a tendency to loose bowels upon returning to a reasonably full diet. Several had a gradual return of the condition and passed from observation.

TREATMENT.

It has been my experience that some of these cases are very obstinate to treatment. Ipecac will eliminate the organism in some cases. Emetine is beneficial but not curative, and upon discontinuing the drug the condition returns. Under this treatment the cer-

and their motility is sluggish. One observer (9) reports a number of cases of amoebic dysentery in which the cercomonas were also present in which both parasites were expelled by the use of the fluid extract of chaparro amargoso; in these cases the cercomonas were not present in very large numbers. Two of my cases in which irrigations were not used, did not recover until treated with large doses of bismuth subcarbonate; for a month after discontinuing treatment there remained a tendency to loose bowels which necessitated a carefully restricted diet. Castellani (3) states that methylene blue, 1 to 3000, kills the cercomonas, and treated several cases successfully using this solution as an irrigation. In these cases I used with benefit a one-half per cent solution of tannic acid, and in another a solution of quinine. At the time of treating these patients I did not know of Castellani's work, otherwise would have tried the methylene blue irrigations.

In the event of being called upon to treat another case of cercomona diarrhoea I will probably use about the following treatment: Every two hours, from 8 a. m. to 6 p. m., 1 glass of milk, and in addition at 8 a. m., noon and 4 p. m., 1 slice of buttered toast.

10 A. M., irrigation of 2 pints water to cleanse bowel, followed by 2 pints of water containing 7 grains of methylene blue.

Noon. Hypodermic injection of twothirds grain of emetine hydrochloride.

At 8 a. m., noon and 4 p. m., 1 teaspoonful of fluid extract of chaparro amargoso.

comonas becomes very few in number '9 p. m. After retiring 30 drops of and their motility is sluggish. One observer (9) reports a number of cases of amoebic dysentery in which the cercomonas were also present in which both parasites were expelled by '9 p. m. After retiring 30 drops of laudanum, followed in 20 minutes by 30 grains of ipecac in salol coated pills. Allow no pillow under the head, keep the house quiet, and let the patient be undisturbed.

In the morning at 6:00 give one or one-half ounce of salts.

This treatment should be carried out four days, then for ten days keep the patient on a soft diet and give chaparro amargoso, two teaspoonfuls 15 minutes before each meal.

EPIDEMIC.

In El Paso last summer there were a great many more cases of severe diarrhoea among adults than usual. A number of these, on examination of several specimens of faeces, showed enormous numbers of cercomonas without the ameoba histolytica being found. One of these patients passed from under my care and died from a continuation of the diarrhoea: it may have been a tubercular ulceration of the bowel, but I do not believe that it was. Another severe case has since recoverad from the administration of large doses of ipecac. Another one, who is not now under my treatment, had a recurrence with two to four soft or liquid movements a day until the advent of the present cool weather; she is improving now. In several other cases the amoeba histolytica was found, but these are not included in this series.

In previous summers I seldom saw cases in which the cercomonas were present in large numbers. There were some in which a few or a moderate number were seen, and being so few, I did not attach any etiological significance to them.

The question here arises: Where did these patients contract their infection? It is impossible to give a definite answer to that. It is strongly suspected here that the oriental (and some other) truck gardeners have been in the habit of using the so-called "natural fertilization" on their crops. It is alleged that they carefully save their excrement and urine and pour them over their plants to make them grow better. That seems to me to be an ideal means of transmitting infections to those who eat uncooked, or in other words, unsterilized garden-grown food. This may, or may not, be a contributing cause of gastro-intestinal infections in the summer time in this region, but at any rate this filthy habit, if it actually exists, should be rigidly suppressed.

I will not report any cases in this paper, as time does not allow, but expect to do so at a future time.

REFERENCES.

A. G. Brown, Jr., Southern Med. Jour., Aug. 1914. P. 620.

Judkins, Texas Med. Jour., July, 1914. P. 126.

- (9) P. I. Nixon, Jour. A. M. A., May 16, 1914.
- (6) C. Rosenbeck and G. L. Rohdenberg, N. Y. Med. Jour., Feb. 25, 1911.

A. Castellani and A. J. Chalmers, P. I. Jour. Science, July, 1910.

W. Allen, Abstract in Jour. A. M. A. Aug. 6, 1910. P. 529.

(8) G. C. Dolley. Jour. A. M. A., Oct. 15, 1910.

J. G. Gage, N. Y. Med. Jour., Dec. 4, 1909.

(7) W. E. Sistrunk, Jour. A. M. A., Nov. 4, 1911.

R. C. Rosenberger and T. C. Terrell, N. Y. Med. Jour., Jan. 11, 1913.

- (5) G. Franchini, Policlinico, March, 1912.
- (3) Castellani, A. Brit. Med. Jour., Nov. 11, 1905. Vol. II., p. 1285. Anders and Boston. Medical Diagnosis, 1911. P. 914.
- (2) Sahli's Diagnostic Methods. 1911. P. 518.

R. C. Kemp. Diseases of Stomach, Intestines and Pancreas. 1912. P. 839. American Text-book of Pathology,

1901. P. 322-323.

(1) Gary N. Calkins, Protozoology, 1909. Pp. 46-47.

•C. W. Daniels. Laboratory Studies in Tropical Medicine. 1911, P. 637.

(4) Boas. Magenkrankheiten, Aufl. Pp. 206 to 207.

J. M. Anders, Practice of Medicine. 1913.

J. C. Hemmeter. Diseases of Intestines. Vol. II., p. 542.

A. Schmidt. Klinik der Darmkrankheiten. 1912. P. 118.

Kaufman. Specielle Pathologische Anatomie. 1904.

Eulenberg, Kolle and Weintraud. Klimschen Untersuchungsmethoden. 1904. P. 233, I Theil.

E. C. Prentiss, Bulletin El Paso County Med. Society. March, 1914.

THE PROPER TREATMENT OF NEW GROWTHS.

W. W. WAITE, M. D.

El Paso, Texas.

(Read before the 33rd Annual Meeting of the New Mexico Medical Society, Albuquerque, Oct. 5-7, 1914).

What to do with new growths is

not an easy problem to answer, otherwise there would be no need of bringing the subject before you for discussion at this time, but the death rate from malignant growths is still very large and with all our best efforts has been reduced very little, so if we can find more effective ways of combating this scourge, we ought to do it. By new growths, I mean both malignant and benign, but with the emphasis placed on cancer. To review all that has been done, and is being done, in the way of finding the cause and cure of cancer would require too much of your time. There are now many institutions founded especially for the purpose of finding the cause and the cure of cancer, but to the work that is being done in them. I shall not refer. simply wish to bring before you some of the facts that can be used in every day routine that have been well established by some of the best investigators.

It has been generally known for a number of years that patients operated on early for cancer and the growth removed completely have been cured in most cases. It has also been known for a long time that cutting into a cancer without removing it has a tendency to cause it to grow and spread more rapidly. It has also been known for many years that cancer tissue could be transplanted from one part of the body to another by means of a knife or other infected instrument, as well as the fact that is could be transplanted in another person's body not heretofore infected. Young has shown in his work on bladder tumors that papillomata could be transplanted into the cut abdominal wall while the tumors were being removed and he even found that it was difficult to remove these growths with the knife without having an infection of the abdominal wound. Many of these facts, Bloodgood has been trying to get before the public for years, so that people suffering from any form of swelling, ulcer or nodules under the skin or about the bones and joints would recognize the condition and consequently apply early for treatment when there was a chance for a cure. Recently he has carried his studies farther and has given us some very important facts, as follows:

He found that cancer very rarely begins in a healthy spot. It usually develops in an existing nodule, ulcer or tumor of some kind that has been present from months to years and no especial attention has been paid to it. until it commences to grow rapidly. Thus, in most cases, if not all, there is a definite precancer stage. Bloodgood found in all of these cases, both of the mucous membranes, skin and the breast that where operations were performed in this precancer stage, the percentage of cures was 100 per cent. In cancer of the breast in particular, the percentage of cures under the best conditions for all cases is about 40 per cent and in those cases that were operated on early. the number of cures was 80 per cent. In those cases in which a specimen was removed for diagnosis and later operated on, not one single case has remained cured. In all cases of malignant disease operated upon, the number of cures is probably not over 25 per cent.

In the light of the above findings, it becomes very evident that all new growths whether benight or malignant should be removed and particularly so when the patient is in the cancer stage.

It is much easier, safer and better

to remove a growth while it is still benign than to wait until the cancer is well developed and operation difficult or impossible. As to how the growth shall be removed depends on where it is located and the nature of the growth. Young has shown the best way to treat papillomata is by removing them from fulguration current. No doubt this method could well be applied to similar growths in other parts of the body. In the bladder, Young has found that the benign growths vield to the treatment and cancers do not. Whatever is done, care should be exercised not to do something that will make conditions worse. If possible never cut into a new growth unless to make an exploratory incision. If anything is done, remove it completely either with the knife of cautery. In other words, treat every one of these growths in such a way that if it is cancer nothing will have been done to spread it or make it worse, and if possible remove it. -

Tumors with exposed surfaces like the papillomata, etc., should be seared over the surface with a cautery before operation is begun, because in these cases the mere handling of the tumor necessary in its removal may plant enough living cancer cells in the wound so that the growth will continue.

With the superficial small growths a differential diagnosis is unnecessary except for prognosis. They can all be removed completely without any extensive or mutilating operation. In the cases where the growths require a more extensive operation, the surgeon must be prepared to make his diagnosis at the operating table by exploratory operation and gross examination with or without the aid of frozen section, in

order to save the patient unnecessary mutilation. This is often difficult and a surgeon should avail himself of every opportunity to study new growths in the gross condition so as to be able to make a reasonably accurate diagnosis from appearances at the exploratory operation. In case malignancy is diagnosed the cut surface should be seared and the complete operation done at once. It should be remembered here, never to cut out a piece of tissue from a growth and wait for diagnosis, for in most, if not all cases where this has been done, no cure has been obtained. Unless a competent pathologist is at hand to do frozen section work and give a report while the patient is still on the table, the surgeon must rely on his own diagnosis.

As to preserving specimens: All specimens should be preserved in 10 per cent formalin and either studied microscopically or kept for future reference and study.

In conclusion let it be remembered, that sooner or later certain growths are likely to become malignant; that nearly all cancers and sarcomas are present for periods of from months to years as benign tumors and that there is a precancer stage and in dealing with new growths, keep in mind that to cure them it can be done most effectively in this precancer stage and let whatever is done, be done early and completely.

Discussion: Dr. S. D. Swope, Deming.

I think Dr. Waite's paper is unquestionably one of the most valuable and timely papers that we have had. The time is rapidly approaching when no good operating room is going to be without the necessary apparatus for the rapid diagnosis of growths that are to be removed. We have had this matters brought to our minds so frequently

in the last few years, that no conscientious surgeon can fail to appreciate the importance of a procedure that is almost essential to good surgery.

It has been demonstrated that our dependence on laboratory diagnosis has increased with a great deal of rapidity in the last few years; since we have been studying these conditions with more care. To be sure many of these growths come to us when the microscope is not necessary to determine the character of the neoplasm. Many of them do come to use when we feel that with the proper sort of information we can give our patients better service. There are few people at the present time who are no more than willing to pay the fee of the pathologist, that they may have positive information with reference to the condition.

His suggestion with reference to burning of the surface of a neoplasm, that has been proven by pathological examination to be malignant is suffi proof of the importance of the examination. We must remember that in burning a cancerous growth, we not only sear the surface, that no more seed may be scattered in fruitful ground, but we destroy the seed immediately surrounding the growth, to a depth far beyond what we realize in the beginning. I have had this matter brought to my mind most positively in a recent case. A case of advanced cancer of the uterus that would generally be considered inoperable. The growth had extended apparently to the outer wall of the organ. The patient was told that this was a cancerous growth, for the character of the growth was very apparent. She was also told that a cutting operation would not only do her no good, but would, in all probability, extend the disease and light up a latent area already infected, in the surrounding tissue. Dr. Waite confirmed the diagnosis from a small piece of the growth detached for that purpose. A recent observation of Ochsner and his work suggested the use of the fire irons. This operation was offered her and accepted and the fire irons were used until I felt I had reached the limit. The patient is apparently well after one year Ochsner reported to me cases last year that had gone over fifteen years which would have been considered inoperable by any other method than actual cautery. Some of his cases had died of other diseases, and a certain percentage were alive without a recurrence.

I know Dr. Waite well. I know the excellence of his work in El Paso and I consider him an expert in his class. If I could have my way I would have the necessary apparatus near my operating room, and Dr. Waite to preside over it during every operation where there was any doubt as to the character of the growth.

It has been well said, many times here, that when we start in to do an operation we seldom know what we have to do, until we are thoroughly in the case.

Dr. C. M. Mayes, Roswell.

I want to ask a question of Dr. Waite: Do skin cancers in his experience recover without any treatment at all? I know some authorities say such a thing happens. About a year ago a gentleman friend of mine, a man who had what we all supposed was epithilial cancer of the lip; it was a bad looking affair, and he was a devotee of the late lamented Mary Baker Glover Eddy, and his friends would ask him so much about it that he left and went to Kan'sas City, and came back, and then he got worse, andwent to Los Angeles and to San Francisco, thence to Honolulu, and was gone about six months and came back, is now about well, and I wondered if it was a mistake in diagnosis, or do these skin cancers ever recover spontaneously?

DISCUSSION LOCKETT'S PAPER, PUB-LISHED IN DECEMBER.

Dr. Prentiss, El Paso, Tex. I enjoyed the doctor's paper very much, indeed. He has studied this question very carefully and must have devoted a great deal of time to its preparation. I believe contrary to the statement of some of the large clinicians that duodenal ulcer is not as frequent as gastric ulcer. I wrote a paper at one time on this subject which was published in the New Mexico Journal. In large numbers of post-morten examinations done on all people who die, as in Germany, it is found that gastric ulcer is far more frequent than

duodenal ulcer. The relative frequency of the latter at operation is due to the fact that it is not as amenable to treatment as gastric ulcer, and a larger proportion comes to operation that the latter. Bassler states in his text book on the "Diseases of the Stomach," that dividing the cases of gastric ulcer into four sets, one group will be typical and easy to diagnose, another will be atypical but can be diagnosed on observation, and the other two cannot be diagnosed. even on most careful examination and observation, and I guess that is about correct. The location of pain in cases of duodenal ulcer in my experience has usually been in the region of the stomach, and not over the duodenum.. Some men state that perforation occurs in 20 per cent of the cases of duodenal ulcer; that is not my experience and I don't believe that is correct; I don't believe that it occurs in more than 5 per cent; I know the text book statements, but that is my own particular experience.

Discussion by Dr. William Howe.

I am sure that the other members of this Society have enjoyed this remarkable paper as well as myself. It has been very instructive and very concise-contains some very valuable points, something that we all meet in every day practice, in every day life and deals with something we have all slipped up on many times and can always expect to. Makes me think of the assertions, for instance, of John Deaver, of Philadelphia. In going into the clinic we notice on the bulletin at the door many times the word "section;" so one day some one asked Dr. Deaver what is the proper diagnosis of these cases, why is section on here so many times? Deaver always answered: The more I do, the less I know, less sure I am of what I am going to find, and that is what we all find in our work, no matter how painstaking we may have been. I might say a few words in regard to abdominal diagnosis which has been of great interest. The last mentioned point in regard to the paper was, pains due to perforation, symptoms of perforation. In my experience the strongest symptom I believe that we can go by and rely upon, together with the history, is the general rigidity of the abdominal walls, more so in perforation than in any other one thing that we meet. The more we study living pathology the better qualified for diagnosis we will become. In gastralgia, some of the important symptoms that might mislead us for something else is the symptoms of globus hystericus. These symptoms should all be inquired into and investigated. appendicitis the most radical points for diagnosis are first, as a rule, vomiting before pain, then pain following which is more or less referred to the epigastrium which sooner or later becomes localized with tenderness in the right illiac region, and probably one of the main and the best points of making the diagnosis through pain is to percuss instead of palpate the point over the appendix; to exclude hysternia, a good way is to pick up the skin at that point and pinch it; that will show whether there is a nervous ailment or not by the pain being produced by a superficial or cantaneous stimulus, instead of by deep pressure.

Discussion: Dr. McGraw's Paper. (Published in December). Dr. W. L. Brown, El Paso.

This paper of Dr. McGraw's makes me feel like I was at home, it sounds like he faked some of my own case records. One thing I would like to emphasize and that was in making a mistake in operating for appendicitis when you really have a urethral stone. We are inclined to think that was a more frequent mistake, than was formerly thought. Our attention was called to it most forcibly, some three years ago after a patient was operated on for appendicitis he passed the stone through the urethra. Such mistakes are made because examination sufficiently thorough to avoid it is not made. One other case that I recall particularly, and that was the case of appendicitis-with floating kidney-we had a similar case, except that we had one better, and that was that this case came to us, referred for appendicitns, and we found that she had a floating kidney of the second degree-and proceeded to remove the appendix and put the kidney in place; she was not relieved and about a year later she

continued to have these attacks, but of short duration and very often she would get them over before the doctor arrived; we had done all we could to make the diagnosis; she said, doctor, when I get these little attacks of pain there is a little swelling down here. As a matter of fact we had a femoral hernia and she would have these severe pains and she would lay down and relax, and would always be over it before we got there and saw her. We never dreamed of her having such a thing as a femoral hernia. There is one other class of cases that it is easy to make a mistake in and we made that mistake once and unnecessarily. That is, the case of typhoid with early pains in abdomen and tendernes over the gall bladder, operating without making a leucocyte count.

When these mistakes are made one can nearly always look back and see that a more careful examination would have avoided them.

Abstracts

The Quack's Horoscope.

"If there were anything in astrology," says The Journal of the American Medical Association, "we should have read something like this:

"'October, 1914: This is a month in which Saturn rules strongly in favor of the public health, and while this configuration prevails, it augers ill for quacks and charlatans. The horoscope of the medical faker presages danger, and those that are prudent will seek the cyclone cellar.'

"On October 7 'Professor' Samuels, the Wichita faker, was found guilty in the federal courts on eleven counts; the maximum penalty for each count is a fine of a thousand dollars and five years in prison. Samuels amassed wealth by swindling the sick and suffering by selling a mixture of sugar, salt and water as a cure for practically all diseases. On Oct. 22, 1914, Orlando Edgar Miller, late of Chicago and Denver, was sentenced to prison in London after being convicted of having caused the death of a woman by administering a drug while she was a patient in an alleged sanitarium he conducted. Miller will be remembered as

the quack who exploited the so-called "International Institute for the Treatment or Tuberculosis" in Chicago. The Journal investigated Miller and his 'institute'; showed up the quack's record: proved that over 80 per cent of his victims died under treatment and in general turned the search light on the scheme. On Oct. 21, 1914, Dr. Richard C. Flower was arrested in Canada on a charge of grand larceny. Flower has been a fugitive from justice for some years and is said to have swindled the public out of more than a million dollars. He founded the 'R. C. Flower Medicine Company,' a mail order medical fraud whose president was B. O. Flower, president and one of the founders of the 'National League for Medical Freedom.' Altogether, the present month has proved a bad one for medical fakers."

The Relation of Sewage Disposal to Water-Supply.

"The future development of large public water-supplies in this country," says The Journal of the American Medical Association editorially, "is likely to involve the purification of surface waters, rather than the utilization of ground water sources. Useful as the latter are under many conditions, they, nevertheless, in many regions are inadequate to supply the enormous demands of American municipalities. It is well known that surface waters in general are more or less contaminated. In the practical treatment of the water supply problem the degree of sewage pollution that is admissible in the water to be purified has become more and more of a definite issue. There is now a sufficient amount of evidence to show that a dangerous situation is created when a great burden is placed even on the best constructed and most skilfully operated filter. If the water to be treated is very highly polluted the likelihood of accident is increased many times."

A noteworthy attempt to establish some sort of working standard for the character of raw water has been made by McLaughlin in a paper published in The Journal for October 31. This writer believes that in order to allow for a proper margin of safety the number of B. coli in the raw water should not range over 100 to 500 per hundred, c. c. "With such a water," The Journal con-

tinues, "it is supposed that proper filtration—slow sand or mechanical—constitutes a reliable safeguard against water-borne infection. It must be admitted that the data on which such considerations are based are not very extensive, but so far as they go, they appear to justify McLaughlin's position. If the establishment of such a standard finds acceptance among water experts, it would seem to be desirable, by the use of hypochlorite or other means, to reduce the number of B. coli in highly polluted waters to not more than 500 per hundred c. c. before reliance is placed on ordinary filtration methods."

Differentiation of Mentality.

In this issue October 31, The Journal of the American Medical Association notes the work of Pearson, who takes issue with many other workers in the field of eugenics regarding the differentiation between the normal, feeble-minded or the mentally backward. "The importance of a correct determination of these various classes for purposes of segregating the protection of society can hardly be overestimated," it says, "and yet there are lacking truly scientific studies necessary to determine these problems. It is necessary to learn to what extent the mentally defective class is produced by inheritance, improper environment, or from poisoning of the parental system. Although there exist numerous casual investigations of the heredity of mental defects, there seem to be lacking adequate anthropometric measurements of the feeble-minded compared with controlled series of normal children, as well as psychometric studies and a purely scientific investigation of the factors of heredity and environment. The settlement of these questions cannot come from the physician alone, nor will the social investigator be able to determine it.

"From our present knowledge we are not able to segregate all the feeble-minded. Although a mental test may strain off 20 to 30 per cent of the so-called feeble-minded, beyond that point it is not reliable. What are needed are tests of self-control of emotions, of feelings and relation to social duties; in other words, tests of moral judgment. Until this type of investigation is

adopted, segregation of the feeble-minded will be a matter of the personal equation of the investigator."

The Beginnings of Physicochemical Methods in the Medical Sciences.

"The physician who has received his scientific training in recent years, and likewise he who, though schooled in an earlier era, has not allowed the progress of knowledge to leave him stranded on the shores of superseded ideas," says The Journal of the American Medical Association, for October 31, "is often prone to forget the beginnings of the learning which we call modern. Osmotic pressure, isatonic solutions and the ionic theory are familiar expressions. In the light of the wide-spread importance of the subject-an importance that manifests itself in a practical way whenever a saline infusion is administered -it ought to interest those who have any concern whatever for the beginnings of scientific practices to hear something of the history of the idea of isotonic solutions and all that it carries with it. Fortunately the story has lately been told by one who took a most active part in its performance, namely, the well-known physiologist, H. J. Hamburger of the Dutch University at Groningen.

"It had long been known that many substances exhibit the property of 'attracting water' to themselves. This force, wasseranziehende Kraft; as the Germans called it, is of great significance in the life of plants, in which it accounts for some of the movements of the sap and the unfolding of the parts. As early at 1844 Mitscherlich is said to have attempted to measure it in a quantitative way: but it was the botanist Hugo de Vries who described the first really successful methods at Amsterdam in 1882. By selecting solutions of various concentrations of the same substances he demonstrated that a definite strength always induces plasmolysis, that is, the beginning of shrinkage in the contents of plant-cells away from the walls of the latter. All solutions that just initiated this effect were termed isotonic by de Vries.

"Hamburger relates how his laboratory chief, Donders, who had heard de Vries present his result to the Academy of Sciences, discussed them with the young assistant in physiology. The question at once was suggested whether similar osmotic phenomena would apply to animal cells. Thereupon Hamburger, then still a beginner in science, started the classic experiments on the behavior of red blood-corpuscles toward salt solutions, showing as early as 1883 that those concentrations of different salts in solution which just induce hemolysis show the same inter relations as those which de Vries had found isotonic in his plant experiments. The modern era of the application of physicochemical points of views to research in the medical sciences may be dated from these investigations, not from van't Hoft's theory of osmotic pressures which was in reality developed somewhat later (1885) in its physiologic relations. 0.9 per cent. sodium chlorid solution was ascertained to be isotonic with blood-serum. and its use to replace the older strength of 0.6 per cent. begun."

Singeing the Hair.

"The reams of paper that are used up each month in articles in the daily papersand weekly and monthly papers-on beauty culture is conclusive evidence," The Journal of the American Medical Association beelieves, "that it is as natural for man to desire to beautify the person as it is 'to indulge in the illusions of hope.' A sound mind in a sound body suffices the seriousminded minority, but apparently the innumerable majority, if they had their way, would have a comely body and take their chances on any old kind of a mind, on the principle that it is better to be good looking than wise, because more people have sight than understanding. To decorate and beautify the body is an inborn passion; the savage does it differently from us, but when it comes to the many manipulations and remedies that are recommended by avoiding wrinkles, giving the eyebrows an aristocratic arch, coaxing the lashes to be long and langurous, making the ears pink and small or the nose straight and thin, removing a double chin or taking the core out of the Adam's apple, we have nothing on our uncivilized and supposedly more ignor-

ant brothers. The hair in particular is the object of all mankind's cosmetic endeavors. When it comes to civilized man he is universally engaged in trying to save what he has left or regrow what he has lost. Women, with few exceptions, do not become bald, but all women, in their opinions, are threatened with that unspeakable calamity; men not only may get bald, but a large number of them already so. And thus the popular remedies for the hair need almost a Surgeon-General's catalogue. Vibratory and electrical treatments, hair tonics that feed the hair roots, as though they grew out of the scalp like broom-sedge out of an old field, neat's foot oil and crude kerosene, massage and mange cures, all have their futile trials. Among these our particular topic now is singeing the hair. This is recommended to overcome splitting at the ends and to prevent falling of the hair, the reason for the latter being that it 'closes the pores and keeps the fluid in the hair. With the long hair of a woman which has a tendency to split at the ends, it is possible that singeing the tips may be of some use; it substitutes a charred blunt end of fused horn for one tapering to a point or cut clean across. But even in cases of this sort it is less useful than greasing lightly the hair and thus supplying the fat which is lacking in such hair. For the hair of men, which is kept short, singeing is not of any use in preventing splitting; hair which is not allowed to grow its natural length does not split, unless it has a deep-seated disturbance for which there is no such simple remedy. Of course singeing the hair-ends in order to prevent the fluid in the hair from escaping, like sap from a tree, is based on an entire misconception of the hair's structure and nutrition. The hair does not contain any more sap than a buggy whip; it is not nourished by any fluid in it, but by the blood plasma that reaches only the hair root. The hair above the skin surface is a spine of horn, which is even oiled from without, and singeing its tips has no effect whatever on either its nourishment or its growth. It is certain that singeing the hair is of no value in preventing its fall; in fact, the only value the procedure has is to the zealous hairdresser who gets his little fee for doing it—unless it is worth a quarter to the seeker after hair to think he is doing something even if he is not."

Game, Stock and Citizens.

The epidemic of foot-and-mouth disease and its effect on the packing industry and the stock yards of Chicago have been commented on widely in the daily press from varionus points of view. "One of the most illuminating comments," The Journal of the American Medical Association believes "appeared in a recent issue of the Chicago Journal under the heading 'Live Stock Versus Quain.' Taking the best available estimates of the amount of live stock contained in the state and figuring on an average value of horses at \$140 a head, milk cows at \$65, other cows at \$50, swine at \$15, sheep at \$6 and mules at \$150 (minimum valuations, as most will admit, the Chicago Journal says the total value of live stock in Illinois would be \$435,276,000, for the protection of which the state legislature appropriated for the current year a total of \$37,340. By the way of comparison, the Chicago Journal quotes the appropriation for the protection of fish and game for the same time, which amounts to \$151,600. The Chicago Journal properly characterizes such a situation as 'intolerable.' It says: 'To spend four times as much money protecting quail, ducks and prairie chickens as we spend in caring for one of the basic industries of the state is sheer communal lunacy.' This is true. The farmers and business men of Illinois should see to it that every cent that is necessary to protect the live stock of the state is provided, no matter what economies may be necessary in other directions. But, if such appropriations are justified for the protection of the lives and health of animals, how much should be appropriated to protect the lives and health of the men, women and children of the state? Certainly more than for fish, game and live stock. Yet the appropriation for the protection of the 5,638,591 men, women and children in the state was for 1914 only \$120,000, \$30,000 less than was appropriated for the protection of fish and game. Are the lives of its citizens of less value to Illinois than the preservation of its quail and bass?"

Rubber as a Source of Hygienic Danger.

The Journal of the American Medical Association calls attention to a recent government report which notes that a large number of additional materials are used in rubber compounding simply to reduce the cost of the product. Among these may be mentioned writing (calcium carbonate), baryes (barium sulphate), clay and various rubber substitutes, such as artificial rubber, oils and tar products. Finally, socalled recovered rubber, or shoddy, is used to a large extent in rubber compounds, resulting in a varying and generally unknown composition of the mineral constituents of the finished product. It is further stated that antimony sulphide can replace the sulphur, wholly or in part, in a simple vulcanized rubber, the resulting product being a brilliantly colored terra-cotta rubber. As the metallic base also gives a certain toughness and durability to the product, the use of antimony sulphid in place of sulphur was formerly considered highly desirable in the production of a rubber having wearing qualities. Despite the fact that even better wearing qualities can now be obtained by the use of other metallic compounds, especially zinc oxid, red rubber is still popularly regarded as a superior product. This in turn has led to the artificial coloring of ordinary rubber by the use of other compounds, such as iron oxid and organic col oring matter, so that one may find on the market many varieties of red rubber that are free from antimony. "In the case of most articles of rubber the existence of filling materials, pigments, etc., has no hygyenic import," says The Journal. "Cost and durability are the chief concern of the purchaser. The use of various heavy metals in the manufacture of nursing-nipples and small rubber toys affords an instance of a possible unsuspected danger to the health of infants who tend to extract soluble products from such articles in the mouth or by the gastric when small pieces of the rubber are accidentally swallowed. There

are certain specifications which determine the general hygienic properties of rubber nipples in respect to ease of cleansing. With regard to the composition of these and other rubber articles which are given to young children the government report concludes: The articles should be made of a goodgrade of black rubber, free from shoda/ and from antimony, lead, arsenic and mercury. Of the fillers commonly employed, magnesia, zinc oxid and clay are less undesirable, and barytes is probably without harmful influence. There can be no objection to a red rubber colored with iron oxid. although the advantages of such a compound will probably not compensate for the disadvantages of its being confused with antimony rubber."

lodin

J. W. Jobling and William Petersen, Nashville, Tenn. (Journal A. M. A., Nov. 28, 1914), say that many explanations have been offered for the beneficial results of iodin in causing absorption, but none have been entirely satisfactory. In a series of papers recently published they have demonstrated that the lipoids containing unsaturated carbon atoms are antitryptic, when in colloidal solution, that tubercle bacilli and tuberculous caseous material contain such compounds, rendering them resistant to solution and absorption, which resistance can be overcome when the caseous material is extracted with the lipoid solvents, or when the unsaturated bonds are oxidized or satisfied with iodin. They have further shown that the antitryptic activity of the serum is due to the similar lipoids which can be extracted with lipoid solvents, and that iodin and the iodids, when incubated with serum, markedly lower the antiferment property. Serum from which the antiferment has been extracted becomes toxic because of autolysis (serotoxin), a similar process (absorption of the antiferment by agar, kaolin, bacteria, etc.) being the basis of toxicity of the so-called anaphylatoxin. These studies suggested the possibility that the action of iodin in the body may be due to a combination with the fatty acid, the saturation of the free bonds causing a corresponding neutralization of the antifer-

ment activity of these lipoids. This lowering of the antifermet index of the blood and tissues would permit the removal of necrotic tissue by autolysis. In view of the work of McLean showing that a large amount of the iodin is actually combined with lipoids after absorption, such an explanation might seem rational. In a series of cases obserced in the Vanderbilt Dermatological Clinic, of Columbia University, which were placed at their disposal, they have observed a progressive lowering of the antiferment index of the serum during iodid therapy, sufficiently uniform to show that the iodids so administered to human beings cause a considerable reduction in the antiferment activity of the blood, the net results being, of course, an increase in the proteolytic activity of the blood and tissues. In patients in whom toxic symptoms were noted, the antiferment index, which had been lowered, was increased to the original strength, a phenomenon similar to the effect observed following many other intoxications, and most probably due to mobilization of lipoids themselves, defeating the object for which the iodids were given. In their work on the antiferments, contained in the tubercle bacilli and in tuberculous caseous material, they found that the enzyme-inhibiting action was due to the unsaturated fatty acid, radical in the lipoids. At first they thought this action was due entirely to the soaps of the unsaturated fatty acids, but subsequent work showed that a large portion of the enzyme-inhibiting agents could be romeved by extracting with chloroform. The substances contained in the chloroform extracts are not as active as anti-enzymes when suspended in a salt solution, as they are insoluable. But the sodium soaps prepared from these acids are active, and they found that their activity was in proportion to the degree of their unsaturation, but this action was lost if the acids were first saturated with iodin. These experiments were repeated with the chloroform extracts of tuberculous caseous material, and with unextracted caseous material with the result that the soaps made from the chloroform extracts became inactive and the caseous matter which, previous to treatment with iodin had not been

acted on by trypsin, was now readily artacked. Thus the authors consider that they have definite evidence of the action of iodin on tuberculous tissues, and the explanation of the well-known clinical observation that iodids cause tubercle bacilli to appear in the sputum of tuberculous patients, though they were previously absent. In syphilis, iodin is almost specific in improving symptoms, and causing lesions to disappear, though authorities are unimous that iodids are not curative in the sense of preventing the return of the lesions, which can be accomplished only when combined with some other form of treatment. Since the iodids themselves destroy the infecting organism, we must assume that the results obtained are due to their power to cause resolution of the lesions present. They were not able to obtain sufficient gummatous material to find positively that the anti-enzymes present are similar to those found in tuberculous caseous material, but this is probable. The disappearance of the large gummata under the influence of iodids is due to the fact that the unsaturated fatty acid radicals inhibiting autolysis have become saturated with iodin. It should be borne in mind that the administration of iodin does not prevent the development of experimental syphilis in monkies and rabbits, and they are not so effective in the earlier stages of syphilis as when necrosis of tissue is not so evident. While iodin neutralizes the agents that prevent resolution and absorption, it lays bare the infecting organism to the real germicidal agent and in this way mercury and salvarsan are made more effective.

SANATOGEN.

J. P. Street, New Haven, Conn., (Journal A. M. A., Nov. 21, 1914), has investigated the proprietary preparation, Saratogen, which is claimed to consist of about 95 per cent. casein, and 5 per cent. sodium glycerophosphate. Sanatogen is commonly sold at retail in 100 gm.. or 200 gm. packages for is\$1.00 and \$1.90, respectively—that is ordinarily about 1 cent per gram, as bought by the retail purchaser, or \$4.50 per pound. The casein can be obtained at 10c per popnd in 5-pound lots, and under the most

favorable conditions, the cost of Sanatogen is more than thirty times as great as the per cent. of its suz ,.: ;taoinbgkqjaoinj commercial casein, which constitutes 95 per cent. of its substance. To ascertain whether the customer is justified in paying such a price Street has undertaken certain feeding experiments on white rats, using rations composed mainly of Sanatogen and of casein, respectively, for comparison. The results are given in tabulated form. The rats were weighed twice a week for nine weeks, and a record of the good consumed by each was kept. That obtained shows no superiority of Sanatogen over common commercial casein, and the results might be taken to suggest a slight advantage for the cheaper article. The effects of the substances in promoting the growth of young white rats were also tested and the results tabulated. To conclude, he says: "Comparatice feeding of four male white rats during eleven weeks showed, if anything, a slightly greater but insignificant increase in the weight for Sanatogen over commercial casein. In a ration in which artificial had been substituted for natural protein-free milk, Sanatogen showed no advantage over commercial casein in checking the failure in weight of the rats.

Gastric or Duodenal Ulcer.

E. P. Joslin, Boston (Journal A. M. A., Nov. 21, 1914), has traced 9 per cent. of the cases of gastric and duodenal ulcer seen in private practice during the last sixteen years. A number of cases of gastric or duodenal ulcer were revealed that were not so originally diagnosed. The basis of the diagnosis was the history, with special attention to the symptoms of hyperacidity, pain, hemorrhage, perforation, the duration of the case and the after-history, including also the facts developed by surgery and the necro psy reports. The total number of cases was 234, and 213, or 91 per cent, were traced to date: 142 of the patients were men; 92 women. The average age of the men was 45 years when first seen but the age at onset was 38 years and 8 months. The corresponding age in women was 36 years and 4 months and 30 years and 10 months at onet. The average duration of ulcer in cases still unrelieved is eleven years and the average duration before the cases reached the surgeon, ten years. One hundred and thirty-one patients received only medical treatment; 39 per cent. of these recovered; 42 per cent. were relieved; 12 per cent. were unrelieved and 7 per cent. are dead. Of the patients operated on when medical treatment failed, 82 per cent. were traced and 40 per cent. are well; 16 per cent. are relieved, 12 per cent. no better and 32 per cent. dead. Deducting twelve deaths for which the surgeon should not be held responsible, there were seventy surgical cases; 47 per cent. now well; 19 per cent. relieved; 14 per cent. unrelieved and 20 per cent. dead. The combined medical and surgical results show at present eighty-four patients well or 39 per cent.; sixty-eight patients or 32 per cent. relieved; twenty-six patients unrelieved and thirty-five patients, 16 per cent. dead. Twelve, or 6 per cent. of the 213 patients traced, died of cancer, and of the forty-six patients now dead the mortality from cancer was 26 per cent.

Radium in the Bladder.

F. J. Schoenenberger and S. W. Schapira, New York (Journal A. M. A., Nov. 21, 1914), says that in a careful search of the literature they find few cases in which radium was applied in the bladder in cases of carcinoma. In only one really authenticated case (that of Cauhape) was there any definite report made as the nature of the tumor, the amount of radium used, length of application and end-result. They report two cases with pathologic reports. The first patient died from general asthenia and hydronephrosis due to metastatic growths, after the original tumor had disappeared under treatment. The second case, regarded as inoperable, was operated on and the tumor largely removed with certainly great improvement. They say: "1. We may without danger, even without discomfort to the patient, place in the bladder as much as 15 mg. of radium and allow it to remain as long as twelve hours. 2. We believe that we have shown that radium has the power to remove a tumor of the bladder (carcinoma) and of the prostate within a period of two months. It has also been demonstrated in Case 1 that radium has had a very decided effect in reducing the size of a metastatic growth associated with carcinoma of the bladder. 3. No difference seems to have been evident in the result whether or not part of the tumor was removed. In Case 1 no part of the tumor was removed, while in Case 2 a considerable portion of the tumors was excised. 4. We are of the opinion that the peculiar pyrexia associated in both cases was due to an absorption following the destructive influence of the radium on the tumors. A thorough investigation did not disclose any other cause."

Oral Endamebas.

The tonsils may be the habitat of oral endamebas and the possibility of systemic complications from this cause has been studied by A. J. Smith and M. T. Barrett, Philadelphia, and W. S. Middleton, Madison, Wis. (Journal A. M. A., Nov. 14, 1914). They have set out to determine whether these protozoa found in the pockets of Rigg's disease may not make their way also into the tonsils and there perhaps be of importance in determining or in maintaining certain of the inflammatory lesions of these structures with or without the associated systemic complications. That they do involve the tonsils at times has been proved and they review the literature of the work that has been done. There is no reason for surprise that such is the case, and there is as little reason to hold the frequency of their occurence as human parasites as an objection to their pathogenicity when one remembers that pyorrhoea alveolaris is, except dental caries, the most frequent disease affecting humanity, and an overwhelming portion of all patients seeking dentist's help. The authors made a number of examinations of tonsils, and they describe their methods. In seventeen cases that they enamined, emebas of the type Endamoeba buccalis were found, and in one case another form not unlike Amoeba gracillis. The seventeen patients were all suffering from some form of chronic tonsilitis, usually with hyperthropy. The tonsils of the persons in whom these organisms were demonstrated were all large with pouting crypts.

Rigg's disease has been for years suspected as a cause of chronic arthritic infections. and possibly, too, of some anemias of obscure origin and degenerative lesions of various parenchymatous and even greater suspicion, almost certainty, has been attached to tonsillar infections. In several patients treated for pyorrhea by Dr. Barret., it has been noted after the cure of pyorrhea treated with emetin that gastric and preexisting intestinal disturbances also disappear, and other dentists have given similar testimony. Six cases of chronic arthritis in the Philadelphia General Hospital were examined and in four, all adults, the endamebas were discovered in the tonsils. These, with several other similar ones, referred from various physicians, are reported. In some of these, treatment with emetin hydrochlorid was given with marked advantage, and the authors believe that these isolated cases are sufficiently subjective to warrant further trial. It is not necessary to suppose that systemic complications will always follow the presence of these micro-organisms. Much must depend on the local conditions governing absorption, and the number and type of associated bacteria on which it is certain the amoebas largely feed and may thus set free this antitoxin. Doubtless the bacterial toxins play a more important part than do those from the amoeba itself, and the results are pretty sure to vary.

Cholecystitis.

E. C. Rosenow, Chicago (Journal A. M. A., Nov. 21, 1914), says that little attention has been given heretofore as regards the bacteriology of the tissue of the gall-bladder wall in cholecystitis. He gives an account of the bacteriologic findings tin a case, and of experimental work on producing cholecystitis in animals. The trains of streptococci producing cholecystitis are strikingly similar and resemble those from ulcers of the stomach. The lesions most commonly observed other than cholecystitis, when these streptococci are injected, especially in rabbits, are an ulcer of the stomach, hepatitis about the gall-bladder, myositis, and myocarditis, arthritis, appendicitis, and colitis. He says: "The common presence of streptococci in the wall of the infected gall-bladder and in the center of gall-stones, often in pure culture, while absent from the bile, and their affinity for the gall-bladder in animals, are strong evidence that streptococci are the cause of cholecystitis in man far more frequently than is believed, and serves to explain the good results reported by some as following cholecystectomy in cases of myocarditis, arthritis, and other conditions."

Gastric Cancer.

With an analysis of sixteen cases of gastric cancer in patients under the age of 31, F. Smithies, Chicago (Journal A. M. A., Nov. 21, 1914), reviews the statistics derived elsewhere and the recognized types of the disease. Six instances, some of them dubious, have been recorded in patients below the age of 10. In the second decade thirteen cases have been reported, but in five of these there were no reliable pathologic reports. In the thirteen cases in the third decade there were also a few, but in a few of these there was a seemingly malignant gastric disease. In this total group of 721 pathologically demonstrated gastric cancers from the Mayo Clinic and the Augustana Hospital, Chicago, the percentage of youthful cases was 2.2. There were none females and seven males; the youngest aged 18, the oldest 30; the average age 27.8 years. In 12 per cent. of the thirteen there was a family history of cancer. Apparently occupation was not a casual factor. Two types of histories are noted, the first including cases of a pernicious gastric affection of progressive course appeared with no preceding stomach ailment. In the second group there was a previous history of gastric complaints conforming to the type usually called peptic ulcer. Two of the sixteen cases fall into the first class and the average duration was 4.5 months. In the other fourteen the patients had been affected for an average of 4.8 years with same gastric malfunction which in its early stages had been roughly classed as dyspepsia. In five of the cases the syndrome was that of gastric ulcer. In four cases the socalled ulcer features were definite in some stage in the early period and in four other

cases the symptoms were those of ulcer of an irregular type. In their remaining case there had been gall-stone attacks for four years and stones were found on laparotomy. The later stage of all in group two was typical of gastric malignancy. This period averaged 7.8 months, the shortest three weeks, the longest nearly three years. The malignant course in this group took nearly half again as much time on the average as that in gro up one. In six instances the appetite was poor and constipation was the rule in all. In the malignant stage there was marked loss of weight, in the early part of the disease, intermittent. degree of pain was noted in all cases, in two instances suggesting perforation. In the two case of the first group it was never severe but was continuous and generally aggravated by food and drink. In the other fourteen it came in spells or attacks in twelve. In seven instances it had a fairly definite relation to indigestion; in four instances even after malignancy was shown the food relief of pain persisted but in ten it changed to food aggravation of pain. There was abdominal tenderness in all and tumor was palpated in six cases of the entire series. Eructations and pyrosis were commonly noted, and vomiting at some time in the course of the disease. Hemoglobin estimation in some cases averaged 66 per cent.; and in ten blood was chemically demonstrated in the stools. In fifteen cases important facts were demonstrated by testmeals. Gastric motility was affected in eleven and dilation of the stomach had occurred. Achylia appeared in none and free hydrochloric acid was absent in but one instance. Combined hydrochloric and acid salts averaged 18.1, ranging from 0 to 50. Lactic acid was demonstrated in six cases and altered blood chemically shown in gastric contents, twelve times. The Boas-Oppler bacillus was recognized six times and yeasts and sarcinae were present in eight. The laparotomy findings showed the pylorus involved in five, the lesser curvature and some part of the gastric surface in nine; infiltration of the cardia in one and one case of general carcinosis. Lymph-nodes had been invaded in fourteen and secondary growth demonstrated in other organs in

nine. In eight, medullary cancerous ulcers were present. In the others, adenocarcinoma of the common type. In five cases some form of resection was performed; in seven drainage operations to fit the case, and in four only exploration was possible. Nine patients died within one and one-quarter years following operation. To the other patients a lease of life from two to more than five years was granted. A tabulated summary of the cases accompanies the paper.

NEW AND NON-OFFICIAL REMEDIES.

Since publication of New and Non-official Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies":

Siee's Normal Horse Serum. Marketed in vials containing 100 Cc. Abbott Alkaloidal Company, Chicago.

Diphtheria Antitoxin. Marketed in packages in 10,000 units ready for use. Memorial Institute for Infectious Diseases. Marcago.

Concentrated Diphtheria Antitoxin. Marketed in syringe packages containing from 500 to 7,500 units. F Stearns and Co, Detroit, Mich.

Bacillus Coli Communis Vaccine. Marketed in boxes of 6 ampoules. E. R. Squibb and Sons, New York City.

Staphylo-Acne Vaccine. Marketed in boxes of 6 ampoules. E. R. Squibb and Sons, New York City. (Jour. A. M. A., Nov 14, 1914, p. 1763).

Pyocyaneus Vaccine. Marketed in boxes of 6 ampoules. E. R. Squibb and Sons, New York City.

Streptoccoccus Vaccine. Marketed in boxes of 6 ampoules. E. R. Squibb and Sons, New York City.

Friable Tablets of Emetine Hydrochloride, Mulford. Each tablet contains emetine hydrochloride 0.032 Gm. H. K. Mulford Co., Philadelphia, Pa.

Antirabic Vaccine. Consisting of eighteen doses, one dose is sent by mail daily. Pasteur Institute of St. Louis, St. Louis, Mo. Typhoid Vaccine, Immunizing. Marketed

in packages of three syringes and in packages of three ampoules. H. M. Alexander and Co., Marietta, Pa. (Jour. A. M. A., Nov. 28, 1914, p. 1953).

PROPAGANDA FOR REFORM.

Eckman's Alterative. Eckman's Alterative is a "consumption cure" patent medicine consisting essentially of alcohol, calcium chlorid and cloves. Now the Eckman concern is running a series of advertisements in which medical writings on the use of calcium in tuberculosis are twisted into recommendations for the nostrum. (Jour. A. M. A., Nov. 7, 1914, p. 1686).

The Friedmann Treatment. An investigation made by the U. S. Public Health Service of the validity of the claims made for the Friedmann treatment of tuberculosis is a complete refutation of Dr. Friedmann's claims, not only as to having developed a specific cure for tuberculosis but also as regards the harmlessness of the treatment. The report of the investigation shows the flimsy evidence on which the Friedmann method for the treatment of tuberculosis was based. (Jour. A. M. A., Nov. 7, 1914, pp. 1673 and 1690).

The Action of Iodids on Blood Vessels and Heart. The iodids, especially potassium iodid, have been credited with having a blood-pressure lowering action and have been used extensively in the treatment of arterioscrerosis. D. I. Macht has demonstrated that the iodid ion, instead of depressing the heart and vessels, has a marked stimulating action and that if potassium iodid lowers blood-pressure it must be the effect of the potassium part of the compound. (Jour. A. M. A., Nov. 14, 1914, p. 1767).

Agar-lac. Agar-lac, sold by E. Fougera and Co., is stated to be composed of "Agar-Agar with Lactic Fermente Grs. 41-2, Phenolphthalein Grs. 1-2." Regarding the "lactic ferment", the expert of the Council on Pharmacy and Chemistry reported that Bacillus bulgaricus were present in small numbers only and that there were at least two other bacteria present. The Council refused recognition to Agar-lac because its composition is not correctly declared, because it is exploited in a way to cause lay-

men to use it to their detriment, because unwarranted therapeutic claims are made does not indicate the most potent constituent, phenolphthalein, and because the use of a ready-made combination of cathartic drugs with lactic acid ferments is unscientific. (Jour. A. M. A., Nov. 14, 1914, p. 1777).

Asepticones. Asepticones, sold by the Chinosol company, are vaginal suppositories stated to contain salicylic acid, boric acid, qinin and chinosol. On the basis of the evidence submitted the Council on Pharmacy and Chemistry voted that Asepticones be refused recognition because unwarranted and misleading therapeutic claims are made; because the name does not indicate the potent constituents and because it was considered an unscientific shotgun mixture. (Jour. A. M. A., Nov. 14, 1914, p. 1778).

Bacillicide. Bacillicide, sold by the Prophytol Products Company, Richmond, Va., is an unscientific solution of the Glyco-Thymoline type. It was refused recognition by the Council on Pharmacy and Chemistry because its composition is secret, because unwarranted and exaggerated claims are made for it and because the use of complex mixtures of uncertain composition is unscientific and contrary to the best interests of the public. (Jour. A. M. A., Nov. 14, 1914, p. 1778).

Iron Solution for Intravenous Therapy. This solution, manufactured by Perkins and Ross, Colorado Springs, Colo., contains soluable iron hoosphate as its essential constituent and is recommended as a "chalybeate, emmenagogue and tonic." As the intravenous administration of a drug like iron, which must be continued for long periods, cannot be considered the method of choice, as the composition of the solution is such that changes may occur on standing, etc., which would make the preparation dangerous, and as the method of marketing the solution does not insure its sterility, further increasing the danger of its use, the product was refused recognition by the Council on Pharmacy and Chemistry. (Jour. A. M. A., Nov. 14, 1914, p. 1778).

Maignen Antiseptic Powder. This powder exploited by the Maignen Institute, Philadelphia, is stated to be composed of calcium hydroxid, sodium carbonate, aluminum sulphate and boric acid and its action depends on the sodium hydroxid which forms when the powder is treated with water. It is advertised both to physicians and the public by means of claims which are extravagant, preposterous and dangerous. Thus a pamphlet gives directions for the sterilization of the nose, throat, stomach, lungs, eyes, gums, mouth and the genito-urinary tract. Its use is claimed to prevent blood poisoning, lockjaw, hydrophobia and infectious diseases and mothers are invited to treat their babies' ailments with it. (Jour. A. M. A., Nov. 14, 1914, p. 1778).

Radium Emanation Activators. Outfits for charging drinking water with radium emanation are now widely and extravagantly exploited. For an apparatus which imparts 2500 Mache units to water each day as much as \$200 is asked. Theoretically, 72 cents worth of radium can produce 2500 Mache units of emanation per day. Even if, because of mechanical difficulties 20 times as much radium were required to be present in the activator, the cost of the radium in this \$200 apparatus would be only \$14.40. (Jour. A. M A., Nov. 14, 1914, p. 1780).

Lysoform. Lysoform and Crude Lysoform, made by the Lysoform Gesellschaft, Berlin, Germany, are solutions of potash-soap stated to contain respectively 6-7 and 10 per cent of formaldehyde. These preparations were refused recognition by the Council on Pharmacy and Chemistry because unwarranted claims were made in regard to their efficiency and because their indiscriminate use for the treatment of diseases was recommended. (Jour. A. M. A., Nov. 21, 1914, p. 1780).

Phecolates, Phecolax, Phecozymes and Phecotones. These are tablets put out by F. Waldo Whitney designed to form part of a system of treatment founded on the theory of autotoxemia. The different mixtures consist in the main of well-known remedies, one of them containing ten constituents. Most extravagant claims are made for these mixtures. The Council on Pharmacy and Chemistry voted to refuse them recognition as unscientific shotgun mixtures and because the names do not in-

dicate their potent constituents. (Jour. A. M. A., Nov. 21, 1914, p. 1870).

Serum Vaccine, Bruschettini. This vaccine, sold by R. G. Berlingieri, New York, has for its aim the destruction of the tubercular cell and the facilitation of its elimination by the natural expulsive processes. The manufacturer not having submitted proof of the value of the preparation, the Council on Pharmacy and Chemistry voted that it be refused recognition. Later, information was received that the preparation was now used only in slight cases. (Jour. A. M. A., Nov. 14, 1914, p. 1870).

Sherman's Non-Virulent Tubercle Vaccine. This product of G. H. Sherman, Detroit, was refused recognition by the Council on Pharmacy and Chemistry because the far-reaching claims made for it were not substantiated by suitable evidence. (Jour. A. M. A., Nov. 21, 1914, p. 1870)

White Sulphur Salts. This is an effervescing salt put on the market by the White Sulphur Springs, Inc. It was refused recognition by the Council on Pharmacy and Chemistry because it did not represent the water of White Sulphur Springs, Va., as claimed. (Jour. A. M. A., Nov. 21, 1914, p. 1870).

Unguentum Selenio Vanadic, v. Roemer. This ointment, marketed by Schering and Glatz, New York, is claimed to contain selenium oxycyanid and vanadium chlorid. No evidence of the value of the preparation either in carcinoma or in any of the very long list of other diseases in which it is recommended was submitted. The pharmacologic evidence that such a preparation would be of value in such conditions being practically nil, the Council on Pharmacy and Chemistry refused recognition to the product. (Jour. A. M. A., Nov. 21, 1914, p. 1870).

Iodia. Iodia (Battle and Co.) is claimed to contain potassium iodid in combination with iron phosphate and vegetable "principles." It is extravagantly recommended for use in many and varied conditions. It is asserted to be "almost a specific" in eczema and rheumatism and "a highly efficient form of iodin:" The A. M. A. Chemical Laboratory having shown that untrue statements in regard to the composition

and preparation are being made, the Council on Pharmacy and Chemistry refused recognition to Iodia on this account: Because unwarranted therapeutic claims were made and because the use of this complex mixture is unscientific and a detriment to the profession and the public. (Jour. A. M. A., Nov. 21, 1914, p. 1871).

Narcophin. Narcophin consists of morphin meconate and narcotin mecanate in molecular proportions. It is claimed to be a scientific substitute for opium and to have advantage over morphin. The Council on Pharmacy and Chemistry was unable to accept the therapeutic claims made for it. (Jour. A. M. A., Nov. 21, 1914, p. 1872).

Book Reviews

The Physician's Visiting List (Lindsay and Blakiston's) for 1915. P. Blakiston's Son and Co., Philadelphia, Pa. \$1.25 to \$2.50.

This popular visiting list is now in the 64th year of its publication. Long a favorite it grows more in favor each year. Many tables and much information of value are to be found in its pages. Prices:

Regular Edition.

Perpetual Edition.

Monthly Edition.

Name of patient need be written but once during the month, the whole month's account being kept in one place. Can be commenced at any time. Plain binding, \$1.00; leather cover, pocket, and pencil, \$1.25.

A Manual of Diseases of the Nose, Throat, and Ear. Third Edition, Thoroughly Revised

A Manual of Diseases of the Nose, Throat, and Ear, By E. B. Gleason, M. D., Professor of Otology in the Medico-Chirurgical College, Philadelphia. Third edition, thoroughly revised. 12 mo. of 950 pages, 223 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$2.50 net.

The last edition of this handy manual was published in 1910, since that time numerous additions have been made necessary by the changes in treatment.

A feature of this new edition is its conciseness.

More space is given to diagnosis and treatment than "to care and difficult operations that the beginner should not do."

Much of this third edition has been entirely re-written and much that is obsolete has been omitted.

A valuable feature of this manual is the section devoted to formulas.

Progressive Medicine, a quarterly digest of advances, discoveries, and improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D. and assisted by Leighton F. Appleman, M. D. Volume III. September, 1914. Diseases of the Thorax and its Viscera, including the Heart, Lungs, and Bloodvessels. Dermatology and Syphilis. Obstetrics. Diseases of the Nervous System.

The September issue of Progressive Medicine begins with diseases of the Thorax, and its viscera, including the heart, lungs, and bloodvessels. It is written by Dr. William Ewart, and composes about one-third of the volume There is much new material featured in this chapaer, chiefly of which is the intensive iodine treatment of tuberculosis, which is exhaustively reviewed. The enteire field, however, is covered and a splendid review is found, covering the literature for the past year. The

NEW MEXICO MEDICAL JOURNAL.

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Medical Director

second division, that of Dermatology and Syphilis is presented by Dr. William G. Gottheil. These subjects are comprehensively covered, and a resumbe of the world's leading literature upon them, is given in a concise and readable way. A number of illustrations are produced. The department of Obstetrics by Dr. Edward P. Davis opens with serum diagnosis of pregnancy, to which considerable space is devoted, with an extensive review of the literature treating upon this subject. Other topics relating to pregnancy are handled in more or less of an extensive manner, depending upon the amount of mention in literature appertaining thereto, and of its importance. Considerable space is devoted to labor, abortion, obstetric surgery, puerperal period, and concluding with several pages dealing with the new born. The chapter on diseases of the Nervous System by Dr. William G. Spiller, reviews the progress made, and the literature covering, this field during the past year. It deals with diseases of the Brain, Spinar Cord, and Miscellaneous Nervous Diseases, It covers the past years experience in a very concise and explicit manner.

SPECIFY THE BRAND.

Every now and then one is forcibly reminded of the fact that the pharmaceutical

market of today contains many so-called therapeutic agents of doubtful medicinal value-agents of indefinite and varying potency. The point was well brought out, not so very long ago, by a certain chemist who purchased in the open market ten samples of tincture of opium in which the content of morphine varied from 2.7 to 22.8 per cent. Of three tinctures of aconite which he examined, one was found to contain 9 per cent fore of aconitine than the standard required, and another 20 per cent less. Two specimens of fluid extract of the same drug contained 18.5 per cent and 25.5 per cent more, respectively of the alkaloid than is officially required. Samples of belladonna showed 11.5 per cent less of mydriatic alkaloids in the fluid extract of the root, and 17 per cent more in the tincture of the leaves. Some tinctures and fluid extracts of nux vomica revealed an excess of strychninein one case of 19 per cent.

The foregoing facts are called to mind by an announcement which is appearing in medical journals over the signature of Parke, Davis & Co., bearing the title, "Fluid Extracts and Tinctures of Definite Potency" and opening with this significant question: "When writing a prescription for a fluid extract or tincture, what assurance have you that the product dispensed will be medicinally efficient?—that it will be active, yet not too active?—that it will produce the therapeutic result that you hope for and expect?"

It is well known that Parke, Davis & Co. are authorities upon the subject of standardization, chemical and physiological, and it may be confidently asserted that the practitioner of medicine who reads and ponders what is said in the announcement referred to will find that his time has been well expended. The physician's obligation to his patient, it should be remembered, does not cease with the writing of a prescription. There remains the further duty to assure himself that trustworthy products are used in compounding that prescription. When he prescribes a fluid extract or tincture the physician owes it to his patient to specify the brand—the brand of a reliable manufacturer.

The New Mexico Medical Iournal

Volume XIII JANUARY, 1915 No. 4

$E \cdot D \cdot I \cdot T \cdot O \cdot R \cdot I \cdot A \cdot L$

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

The managing editor of this Journal attended the recent meeting of the Medical and Surgical Association of the Southwest in El Paso, Texas, and was particularly impressed with the spirit with which the new organization was received.

This Association has been formed for the express purpose of solidifying the medical men of the Southwest and of creating a unity which will give strength, and which is free from entangling state and county alliances.

We commend this movement and trust that it may meet with a hearty response from the medical men of the entire southwestern part of our common country.

The one great duty demanding attention from this society is that of creating a more healthy respect for ethical medicone in this part of the world and especially at home. We thought once that our greatest obstacles came from the east, but the managing editor has been forced against his will to conclude that maybe the trouble with ethical medicine in "these diggin's" is with some of our own habits, ideas and tendencies and, it might be added, jealousies.

We heartily commend the new organization to the membership of the New Mexico Medical Society, not to

supplant the state organization, but to supplement the work done there and to give a broader view of our work and a wider knowledge of the good there is in us and at the same time to learn that the other fellow has some of the good in him, too.

From time to time we have had opportunity to call the attention of our readers to our advertisers and at times to some specific advertiser. Under our new arrangement with the Cooperative Advertising Bureau we hope to be able to keep our advertising pages clean and at the same time full. Of course the Bureau will handle only our "awayfrom home" contracts and this does not in any way relieve the membership from responsibility in the matter of keeping up the good work at home. To continue to deserve the patronage of our home concerns we must give them the attention they deserve and in this connection we desire to call to mind the fact that the nearer home our laboratory work is done, the better, and while a portion of our membership is nearer to other points we feel that those who are nearer to should give consideration to the claims of the Crouse Laboratory in El Paso. We feel that the close relationship between the medical men of El Paso and of the New Mexico Medical

Society, as well as the well established reliability of the management of the Crouse Laboratory entitles Doctor Waite and his associates to more than a passing consideration from those of us who are nearer to him than we are to Kansas City or Chicago.

What is true of laboratories is true of other things and we again say to our members that a mention of the Journal when writing to advertisers goes a long way toward making our advertisers satisfied.

In the December number of the California State Journal is recorded a correspondence which occurred between a well informed person, supposed to be the wife of an honest practitioner, party of the first part, and the secretary of the California State Society and editor of the California State Journal, party of the second part; in which the party of the first part propounds certain pertinent questions that have been agitating the minds of the medical profession since Eve lost her "Notch stick" in the first round. The party of the second part makes no attempt to suggest a remedy for an evil that he admits to exist, notwithstanding the fact that he is the real custodian of the Temple Esculapian, that houses The Medical Society of the great State of California, the state that has the most rigorous laws for the protection of the "Laiety" and protects more quacks within her borders, than any other State in this glorious union.

The only consoling suggestion that the party of the second part has to offer the party of the first part is "that honesty is merely a relative term.

There is a certain amount of dishonesty in almost every one and you find the desire to get money, or to get something in ways that are not strictly honest, in every class of society, from the tramp who steals a loaf of bread, to the trust magnate who buys a legislature and steals other people's property to the extent of hundreds of millions. This being the case I think you will see that until human nature changes, there will always be physicians that will split fees and who will do all kinds of not strictly proper work in order to get money." This lukewarm attitude on the part of the party of the second part, who wishes the profession well and the public well, who with many honorable professional men are willing to wait "until human nature changes" is largely responsible for the laxity in the medical profession, that makes quackery and irregularities, a thriving business not only in California, but in many other corners of the globé. is a curious anomaly that relegates a shyster lawyer to the legal trash pile, "when he who steals our purse steals trash" and elevates the charlatan and shark in medicine to material altitudes and motor cars, when all the gold of Ophir cannot restore a life that has departed. When a lawyer enters the legal profession he takes an oath to uphold the dignity of the law and protect his clients' interest. If he violates his oath he is disbarred and both the public and the profession are rid of a nuisance. If all of us are willing and ready to wait until "human nature changes" of its own accord, we will be waiting for some time.

If the federal government would

take a hand in this matter, establish a uniform requirement for licensing a practitioner of medicine including an oath similar to the one required in the legal profession, the violation of which oath would forfeit the right to practice medicine in the United States, a great many of the things that are hampering the progress of legitimate medicine would be eliminated.

S. D. S.

County Society Rotes

The last meeting of the Las Vegas Medical Society for the year 1914 was held at the residence of Dr. Kaser on the evening of December 16th.

It was a good meeting. The attendance was good and there were a number of interesting cases reported. An excellent paper on The Diarrheal Diseases of Infants was read by Dr. Kaser.

The past year has been one of the best in the Society's history. It has been characterized by an entire absence of friction, and a devotion of time almost exclusively to scientific work.

Last year's officers were all reelected. They are: W. E. Kaser, President; Wm. Howe, Vice President; F. H. Crail, Secretary and Treasurer; W. R. Tipton, C. S. Losey and E. B. Shaw, Censors; M. F. Desmarias and F. H. Crail, Delegates to the State Society.

> Very respectfully yours, F. H. CRAIL, Sec.

Original Articles

ARTIFICIAL PNEUMOTHORAX
IN THE TREATMENT OF
TUBERCULOSIS.

A. G. SHORTLE, M. D. Medical Director Albuquerque Sanatorium.

Albuquerque, New Mexico.

Address of the President of the New Mexico Society for the Study and Prevention of Tuberculosis.

Read before the joint meeting of the thirtythird annual session of the New Mexico Medical Society and the fourth annual session of the New Mexico Society for the Study and Prevention of Tuberculosis, Albuquerque, New Mexico, October 7th, 1914.

To the physician the first few months of the use of induced pneumothorax are likely to be ones of unmitigated joy and contentment so far as the use of this procedure is concerned, or at least it is if he has the fortunate results I had, and he is in the mood to thank God that he has at last found the perfect and flawless method for treating the most untreatable of so called curable diseases, tuberculosis; and just about then things begin to happen.

These happenings are varied and all are interesting, but I shall only attempt to discuss one very common offender that occurs in a large percentage of cases and which, for awhile at least,

may disturb the physician's abiding faith in his new treatment. I refer to fluids in the pleural cavity.

These announce themselves in various ways, not infrequently the patient is seized with quite a high fever following a filling of the gas, there is pain more or less marked which may be referred to any part of the chest but usually to the base of the collapsed side, and quite frequently to the diaphragm. The fever slowly subsides and the pain disapepars, and in a few days to a week or two you find upon examination that there is fluid in the pleural cavity.

Again, there may be slight obscure pain, but little or no fever, and you are all the more surprised to find fluid. As an aside, I will say that I am convinced that there are cases of dry pleuritis as they exhibit all the above symptoms without fluid developing, these are particularly annoying when in the region of the diaphragm. Except for the possibility of the formation of adhesions and the limiting or obliterating of the collapse, these pleurisies, with or without exudates, as a rule do no harm, in fact, as shown later may prove beneficial.

It is the purpose of this paper to review briefly the literature regarding these fluids and give our own observations and experience.

We will not consider transudates, a condition that would only obtain when there was dropsy of other parts of the body, and where it is not likely that pneumothorax would prove useful.

PERCENTAGE OF CASES.

Dr. T. von Muralt. Among 64 cases that had completed treatment had 54½ per cent.

Lucius Spengler, 1909, 35 per cent of all cases treated.

Forlanini. In 11 months, 1910 to 1911 (a short period) 26 patients, only 4 had pleurisy, but Favo, his assistant, according to von Muralt, has seen only a few cases in which after long treatment the pleura had not shown a fluid accumulation.

M. Zeigler, of Davos, in 60 cases, 50 per cent.

Baldwin. Of 52 successful pneumothorasis 23 cases.

Minor. Of 75 cases, 15 per cent. Gekler, of Indiana State, at least 90 per cent.

Giese. 25 per cent have developed fluids.

Webb. 10 out of 80 cases.

Holden. 12½ per cent of all cases. Bullock in 25 cases receiving gas, 4 cases.

It is hard to compare these figures since several are reporting on all cases where pneumothroax was attempted, others only on cases with fair collapse and under treatment for some time.

Taking my own cases: I have attempted pneumothorax in 84 cases; of these 21 have developed fluid, or about 25 per cent. Eliminating inoperable cases and cases admitting of insignificant collapse, I am reduced to 62 cases with a percentage of 30 developing pleural exudates.

Taking now 22 cases, none of them treated less than 1 year, and up to 2½ years, only 8 have escaped this condition, or roughly 65 per cent have had pleural exudates. Of four cases, now dischaged and working for some months, 3 or 75 per cent had exudates. This may appear rather high, but I believe it can be entirely explained by the

time factor. As far as I know I have been using this method slightly longer than any one in the West, and I am inclined to think that men having lower percentages now will have greater ones later. This is further proved by Dr. Giese's percentage, who started to use pneumothroax within a very short time from when I did. I might add that I had used this treatment ten months before having a single case of pleural fluid, and then I had three cases within one month.

CAUSES.

Naturally there are various causes suggested. I say suggested for I am sure it remains to be proved which are the dominant causes.

Forlanini mentions cold, rheumatism and journeys. Individually, I should feel more like classing these as predisposing causes, as I feel that a more active agent is required for producing this condition though certainly they might act as a contributory cause in conjunction with some of the following.

Sangman mentions the tearing of adhesion strings, which sounds very reasonable, but for the fact that as it is shown in another part of this paper, these exudates occur almost always some months after the beginning of the treatment, or after all adhesions should have been torn, if that is to occur.

Graetz mentions the anatomical fact that a tubercle forming on the pleural surface during pneumothorax would be likely to spread with a resultant production of exudate while in the uncollapsed lung this is usually prevented by adhesions to the opposite pleura. Doctors Baldwin and Gekler, in their letters, mention this as a probable fact.

Dr. Minor in his letter, and a number of foreign operators, suggest the change in circulation caused by collapse as a probable cause. The time element also is against this suggestion as the disturbance to circulation is greatest when collapse first takes place, while the effusion occurs after there is plenty of time for a balance to have been affected. Added to this the fact that every one agrees that the fluid has all the characteristics of an exudate and not a transudate, it appears to me this cause can be largely excluded.

Doctors Webb and Bullock in their letters both suggest that it may be simply the accumulation of the normal exudation. The fact that these exudates present all the characteristics of the usual inflammatory pleural exudate, and that careful inquiry will almost always reveal a history of pain and usually of fever, in other words of inflammation, would reduce its likelihood as cause to very few cases, if any.

The injection of cold nitrogen or air is also suggested by Dr. Bullock. This appears to me as a reasonable explanation in cases appearing in winter, but I have had just as many occur in the summer, though Forlanini mentions spring as the most likely time for this occurrence.

Dr. Holden suggests that simple mechanical injury through careless use of the needle as a possible cause.

This had previously occurred to me as a possibility, and recently I have avoided as much as possible making my punctures too nearly together, as I felt that in case there was some pleural inflammation left from a previous puncture, another one might excite it into a widespread pleurisy.

I have only one theory of my own which might act as an occasional cause. and this I conceived through some recent experiences of my own. Having a number of febrile reactions occurring in a number of cases in a short period of time, it occurred to me that I might possibly have the carbolic acid which I used as an antiseptic in the water of the gas machine, in a concentration sufficiently strong to effect the air in the bottle. I changed from carbolic acid to mercury cyanide, and took the precaution to pump in new air each day before using. This air is, of course, first filtered through cotton.

We have certainly had fewer temperature reactions since.

To sum up, certainly the vast majority of the exudates must be of inflammatory origin, since all agree that the fluid has the usual characteristics of the fluid found in ordinary pleuritis exudates.

In the fluids examined by us, we always found a high specific gravity and high albumen content, with a preponderance of lymphocytes, and quite a number showed a considerable number of red cells. Doubtless, a great proportion must be tuberculous in character.

It has occurred to me that if the history of a considerable number of non-tuberculous bronchiestasis cases treated by pneumothorax could be collected, it would throw considerable light on the part of the tubercle plays. That it plays considerable is further proved by the fact that all agree that the more extensive the tuberculous involvement of the lung, and the more acute the condition, the more likely there is to be

fluid. Dr. Weinsteins of Davos Platz, figures well illustrate this:

Of 71 pneumothorax cases 33 per cent had pleural exudates.

Of 14 very serious cases 70 per cent had pleural exudates.

Of 36 moderately serious cases 33 per cent had pleural exudates.

Of 21 less serious cases 10 per cent had pleural exudates.

Dividing my own cases in the same way and taking 62 cases treated during the last three years, this of course does not include inoperable cases, nor those receiving an insignificant quantity:

Of the 63 cases, 21 or 33 per cent had pleural effusions.

Of 27 very serious cases 14 or $51\frac{1}{2}$ per cent had pleural effusions.

Of 28 moderately serious cases 7 or 22 per cent had pleural effusions.

Of 8 less serious cases 1 or $12\frac{1}{2}$ per cent had pleural effusions.

Along the same line of argument, I will quote from Dr. Baldwin's letter "My own feeling is * * * that the effusion will appear in direct proportion as the lung is involved close to the pleura."

The cause for cases due to one of the so-called pus germs requires other explanation than that given above. Naturally the first thing that suggests itself is poor technique. I am convinced, however, that this is very rarely indeed the true one.

In the first place, I could not believe such careful men as Baldwin, Lawrason Brown, and Minor, would ever infect a chest, and it is the concensus of opinion in Europe that in these cases, as in the serous exudates, the cause is usually from within, No doubt a considerable number of the mixed infection cases occur through actual lung puncture, in other words, through a spontaneous pneumothorax occurring during the course of an artificial pneumothorax.

I think I have my first case right now, and expect to find pus before many days.

I will here quote from Dr. Lawrason Brown's letter: "We have had four or five cases of rupture of the lung during the course of pneumothorax.

"In one we felt it was our mistake in putting too much pressure in the plenral cavity, but in the other three cases the pressure was low."

In my case, I used only 700 c. c. with a neutral pressure, while the patient who had just come from the East had been accustomed to doses of 1000 c. c., or more, with positive pressure, the last one had been 1100 c. c. So evidently the break could not have been caused by too much pressure. In fact, I am more inclined to expect this to happen in a case with low pressure who coughs violently.

Individually, I feel that the ordinary drainage by puncture will, as a rule, suffice for those cases in which there is no mixed infection and even for those having pneumococcus. Dr. Baldwin mentions the use of Iodoform injections. Dr. Gekler also uses these. Silver nitrate, electrogol, lysoform and collargol I have seen mentioned as useful.

In cases where the staphylococcus and streptococci are present these measures are not likely to be of avail. Naturally, we now have to do with a condition similar to any other pleural empyema, but I should here quote Spengler's warning to not make permanent drainage without first by frequent puncture drainage reduced the cavity in size. It appears to me that this would be good treatment in any empyema.

EFFECTS.

Except for purulent exudates, it is the concensus of opinion that if properly treated, pleural effusions result in no particular harm, except in the occasional case where adhesions form and despite all you can do the pleural cavity becomes largely abolished with the result that the collapsed lung slowly expands, and takes up its work before you are ready for it to do so.

Even in these cases, however, I find there is maintained quite a degree of collapse since there is already a large amount of lung fibrosis and since rather massive adhesions often form. That at least one benefit results from this is also generally admitted, i. e. the inflamed plenra thickens and loses very largely its ability to absorb the gas so that after effusions refillings are not required nearly so often.

T. von Muralt in a very exhaustive paper takes the ground that aside from any mechanical effects, there is a distinct beneficial effect through absorption of the theoretical antibodies contained in the exudate.

He cites four cases to prove the immunizing effects of these exudates if allowed to absorb, and points out that the mechanical effects of the fluid can not be considered since in these cases the lungs were already collapsed.

In one of the four having tuberculous entritis, the bowel symptoms improved after the formation of the exudate, and after it had receded from the maximum height of 7 Dorsal level to the ninth Dorsal and unfavorable symptoms reappeared. This last appears to weaken his argument for if we are to ascribe the improvement to auto serotherapy, why should not the good effects reach its maximum during the time absorption was going on, rather than when the exudate was forming. I would be more inclined to ascribe such improvement in symptoms to the fact that your fluid may give you better collapse than the gas, since you get a slowly increased positivé pressure, and to the further fact that during the formative period the body has one more means of eliminating toxins.

At least I can point to one or two cases showing the same good results when the fluid was drained.

TREATMENT.

The treatment of exudates aside from the pus infection might be termed the "Bryan treatment" or "Watchful Waiting."

All authorities agree that very little interference is advisable. The only difference of opinion is on the subject of drainage. As stated, von Muralt is strongly against drainage and only makes an occasional puncture and puts in gas if the gas bubble shows a negative pressure.

Sangman, Lucius Spengler, Forlanini, Arthur Mayer, all drain when there is considerable fluid and replace with gas, and this is largely the habit of American operators. Dr. Holden differs in so far, as to quote from his letter, "I let strictly alone unless they produce marked distress. In the latter cases, I have drawn off several times and introduced oxygen." He is the

only one I have noted who used oxygen. I also take it, though not so stated in the letter, that he would watch to see that the collapse was not lost through absorption of the exudate.

Individually, I very much favor drainage where the fluid is as much as a pint or more, since, as stated above, I have not much faith in the serologic effect of the exudates, and when using the gas, I feel that there is much less likelihood of adhesions forming with consequent loss of collapse.

There are only two suggestions along this line that I would make: First, I feel that to prevent adhesions as much as possible, it is well to increase the pressure considerably over that received before the pleuritis. This pressure becomes more easily borne from time to time, due to thickened pleura that follows the pleuritis.

Second, in removing the exudate be careful that at no time you produce a negative pressure sufficiently great to result in producing an expansion of, the collapsed lung. I have managed this by first taking out a few c. c. of fluid, then replacing with gas and testing the pressure each time before removing more fluid.

Forlanini has an ingenious scheme for doing this with absolute certainty. He inserts a needle in the fluid at the lower part of the chest, and another in the gas bubble at the top of the plenral space, and as fast as the fluid is removed through the lower needle, gas replaces it through the upper one.

Certainly in my results there is nothing to cause me to change my treatment since of the 21 cases reported practically all have done well, and eliminating two cases who were treated for

spontaneous pneumothorax occurring before artificial pneumothorax was used, we have had only three cases in which the fluid did not disappear after a few drainings. Two of these are doing well, one is not.

I should mention that I have included in my records the two spontaneous pneumothorax cases mentioned above, and four cases coming from the East which already had fluid in the pleural cavity occurring during pneumothorax treatment instituted there.

LITERATURE.

Personal letters from American operators, and

Dr. L. von Muralt, 7th Sulp. Vol. of Beitr .zur. Klinik. der Tuberk. 1914 pp. 356-376.

Saugman. Beitr. zur Klinik de Tuberk. 1914 (XV) pp. 303-482.

Spengler, Lucius. Cor. -Bl. f. Schweiz. Atzte. 1909. XXXIX pp. 801-804.

Forlanini, Carlo. Ergebin. der Inn. Med. u Kinderheilk. 1912 IX pp. 621-755

Mayer, Arthur. Beitr. zur der Klinik der Tuberk. 1913. XXIX 51.

Robinson & Floyd. Arch of Internal Med, 1912 XXVII 289.

Hamman & Sloan. Bul. of John Hopkins Hospital. 1913. XXIV 53.

Brauer, L. & Spengler, L. Beitr, zur Klinik der Tuberk. 1909 XIV 418-476.

DISCUSSION.

No. 1—Paper by Dr. Shortle.

No. 2.—Paper by Dr.Bruns.

Both Papers Discussed by Dr. Twitchell.

I will say just a word in a general way.

don't know of anything particular that I want to discuss or criticize in these papers. I think they have both been very instructive and cover the subject in a very interesting way; we feel grateful for both of these papers to you gentlemen. I think the discussion of percentage as Dr. Shortle has pointed out is ofter unfair, as the same figures are made up on a different basis. The figures at The New Mexico Cottage Sanitarium only included the cases where we really got a clinical collapse. In our effusion cases most were serous, in one mixed infection and in one more or less tubercle bacilli were found. I think it is a very interesting thing in this connection, how numerous the bacilli in the fluid may become and yet the patient show marked improvement. We had two spontaneous ruptures, in one case the fluid developed a mixed infection, doubtless from within, and in the second case the fluid has remained sterile so far, some four or five months. Capt. Burns very wisely said, it seems to me that the last word has not been said. Two questions of great importance and for continued study remain: the first, the proper selection of cases which is a most difficult matter; the second, the remote after effects. Personally I think in this whole question the emphasis must be laid on the fact that it is simply a symptomatic treatment and that should be our guide.

Bruns and Shortle. By Dr. Cipes.

I believe that the bad results obtained from the use of artificial pneumothorax are due to infection more than any thing else. The fact that these results occur more frequently in the advanced stage of tuberculosis than in the early stage, is sufficient proof for such a statement, for the patient in the advanced stage has a lower resistance than the one in the early stage, and is more easily infected.

Artificial pneumothorax is, I believe, a surgical procedure, and should be treated as such. By this I mean that strict asepsis should be adhered to in this as well as in any other surgical operation.

It seems to me that infection in a large number of cases is caused by the administering of the artificial pneumothorax in private homes where the aseptic conditions are not the best. Taking for example the work done in this line by Dr. Holden of the Phipps Sanatorium, I have found that he has had no infected cases. A few weeks ago when I was in Denver he told me that he attributed this success to the fact that he conducts all operations in the most aseptic surroundings, believing that this simple operation should he performed as carefully as a laparatomy.

THE EFFECT OF THE DIRECT
RAYS OF THE SUN ON EXPERIMENTAL TUBERCULOSIS.

(From the laboratory of The New Mexico Cottage Sanatorium, Silver City, New Mexico).

By David C. Twichell, M. D. Albuquerque, N. M.

Read before the joint meeting of the Thirtythird annual session of the New Mexico Medical Society and the Fourth annual session of the New Mexico Society for the Study and Prevention of Tuberculos*s, Albuquerque, New Mexico, October 7th, 1914.

To all of us who are interested in the clinical treatment of tuberculosis the reports of the truly remarkable curative effects in certain surgical forms of tuberculosis by the simple method of exposure of the naked body to the action of the direct rays of the sun is most interesting to say the least. Par-

ticularly is this true in this land of sunshine where the action of the direct rays of the sun may prove to be an important factor in the arrest and cure of disease in patients who come here suffering from the various forms of tuberculosis.

Heliotherapy, as practiced today in Europe, has its great advocate in Dr. Rollier, yet it is interesting to note that in 1857 Mme. Duhamel, who treated scrofulous children at Berck Plague on the English Channel had them wheeled twice a day to the beach and after bathing them and washing their open sores refused to clothe the children completely evidently with the idea that the unobstructed sun and air should be allowed to hasten their cure.

At the present day at the Marine Hospital at Berck, as at certain of the sanatoria in the Alps, the free access of sunlight is considered the essential feature of treatment. The long balconies at the hospitals are constructed for the express purpose of carrying out the open-air method with the complete exposure of the naked body to the sunlight. Dr. Rollier has succeeded in training his patients, both children and adults, by systematic and strict methods adapted always to the individual case. The training begins with exposure to the air and afterward exposure to the sunlight. The use of solar radiation constitutes heliotherapy.

In view of the well-known germicidal effect of the direct rays of the sun on the tubercle bacillus when isolated from the body, and this work of Rollier, demonstrating the curative effect of the direct rays of the sun on certain forms of tuberculosis, the following experiment suggested itself, that is,

to try and demonstrate the effect of the direct rays of the sun on living tubercle bacilli *in* the living organism.

Before describing the experiment in detail I will review the results of a former experiment entitled, "The Vitality of Tubercle Bacilli in Sputum," which I published in 1905. The object of that experiment was to demonstrate for how long a time living tubercle bacilli as cast off from an active focus of disease in the human body would live under various conditions, it being of interest to know for how long a period the tubercle bacillus in sputum, in articles such as handkerchiefs, or in rooms, or in public places, may retain its vitality, and relative to the question as to the danger of sputum as a cause of infection.

"The material used in my experiment was obtained by mixing in equal proportions the sputum of two patients, in whom the disease was actively progressing, so as to make reasonably sure of obtaining a virulent, strongly growing organism."

"One guinea pig was inoculated with each sample of sputum to be tested. If at the end of two to three weeks there was no enlargement of glands, a second pig was inoculated with the same material. After a certain length of time, usually from a month to six weeks, pigs, if still living, were killed. At autopsy, smears of glands and tubercles were made and examined under the microscope."

"The summary of results was, as follows: The tubercle bacilli in the sputum in sealed bottles placed in a dark, moist box, were alive and produced a tuberculous lesion in a guinea pig at the end of 170 days. No tuber-

culous lesion was produced after 188 days.

With the sputum in sealed bottles, placed in a dark closet, a lesion resulted after 160 days, but not after 188 days.

With the sputum in sealed bottes, placed in the diffuse light of an ordinary room, a lesion resulted after 124 days, but not after 175 days.

With the sputum in ice a lesion resulted after 102 days, but not after 153 days.

With the sputum in open bottles, placed out of doors in the winter months, a lesion resulted after 110 days, but not after 132 days.

With the sputum in a handkerchiet, a lesion resulted after 70 days, but not after 110 days.

With the sputum on carpet, a lesion resulted after 39 days, but not after 70 days.

With the sputum exposed to the direct rays of the sun, a lesion resulted after one hour, but not after seven hours. (I understand that Prof. Weinzirl, of the University of New Mexico, demonstrated the germicidal effects of the sun's rays in this region on tubercle bacilli as much more rapid.)

It appears that the conditions most conductive to the prolonged life of the tubercle bacillus in sputum, are darkness and moisture. In my experiment, the bacilli in sputum, under these conditions, were alive at the end of five and a half months. Dryness hastens their destruction. The direct rays of the sun kill them in a few hours.

In the present experiment I have aimed to carry this line of research one step further. That is, as stated above, to try to demonstrate the effect of the direct rays of the sun on living tubercle bacilli in the living organism. In this experiment a pure culture of the tubercle bacillus was used as the infective agent instead of tuberculous sputum, as in the former experiment. This was necessary so as to give as near as possible the same dose to each animal for the sake of comparison.

The cultures used were sub-cultures obtained from a human culture isolated and grown at the Trudeau Laboratory. It goes under the name of H39. Of such actively growing cultures one hundred milligrams were ground up in a mortar with the addition of normal salt solution to the amount of 3 c. c. The dose for each guinea pig was .25 c. c. of this emulsion.

Ten guinea pigs were used of closely the same age and weight. A spot was shaved on the back of each animal and the dose was given subcutaneously in the middle of this area; the idea was to set up a local subcutaneous abscess in the back of the animal where the lesion would be exposed to the direct rays of the sun. The backs of the animals, both controls and treated, were shaved once a week.

All the animals were kept under cover out of doors and protected from the direct days of the sun for one week. At the end of this time all showed small swellings at the site of the injection with every appearance of a local abscess. At the end of this week half of the guinea pigs were placed in a separate cage out of doors under cover and constantly protected from the direct rays of the sun. The other five guinea pigs were also kept in a separate cage

under the same conditions, but each day they were placed for two intervals of from twenty minutes to half an hour; once in the morning, and once in the afternoon, so that the rays of the sun were directly upon them.

These short intervals were decided upon as in a preliminary experiment two guinea pigs succumbed to an exposture of one and a half to two hours in the direct rays of the sun, a striking demonstration of the very powerful effect of the sun's heat and direct rays on these small animals. During the weeks of this experiment the temperature taken on the cages in the shade ranged from 68 to 90 degrees, while that on the cage, as placed in the direct rays of the sun, was from 98 to 118 degrees.

A comparison of the control and treated guinea pigs at the end of eight days of exposure to the sun, showed in the controls, enlarging abscesses, none of which had yet pointed, while the sun treated guinea pigs showed smaller abscesses—all having pointed and freely discharging. These discharges showed numerous tubercle bacilli, and on injection into a second animal, set up a tuberculosis.

On the eleventh day the controls showed enlarging abscesses, and in one case, a discharging sinus. Three guinea pigs showed enlarged inguinal glands. The sun treated guinea pigs showed healed sinuses, none of them discharging. Two of this group showed very slightly enlarged inguinal glands.

On the twelfth day all the controls showed open discharging sinuses. These discharges showed numerous

tubercle bacilli, and on injection into a second animal, set up a tuberculosis. The condition of the sun treated animals remained the same as before.

On the sixteenth day the controls showed enlarging abscesses, freely discharging and enlarged inguinal glands. The sun treated animals showed apparently healed abscesses and no discharge from healed sinuses, except in one case. All except one animal showed slightly enlarged inguinal glands.

On the nineteenth day the sinuses in the control animals were still discharging. The sun treated animals showed healed abscesses with no discharge from the sinuses. One of these animals showed an enlarged inguinal gland comparable to those in the controls, but the rest of this group showed very slightly enlarged glands.

On the twentieth day in three of the control animals there was sign of new abscess formation around the site of the primary abscess. The condition of the sun treated animals remained the same as before.

On the twenty-sixth day some of the control animals showed signs of lessening discharge from the sinuses and a tendency to healing. The sun treated pigs were in good condition with healthy, healed ulcers and very slightly enlarged inguinal glands, except in one instance where the glands were quite enlarged.

On the twenty-eighth day nearly all the control animals showed healed ulcers. They all had much enlarged inguinal glands. The sun treated pigs showed apparently entirely healed abscesses, but all showed more or less enlarged inguinal glands.

A consideration of these facts would point to the healing effect by exposing the diseased part to the direct rays of the sun. In the animals so exposed, the abscesses were not so large and pointed more promptly and become apparently healed. A theoretical consideration might be that the bacteria were in part killed and in part restrained in their growth by the direct rays of the sun. On the other hand, as demonstrated, there were yet some living tubercle bacilli in the discharges and also living bacteria passed to the nearby glands and infected them.

All the guinea pigs were autopsied on the twenty-ninth day. All showed signs of an extending tuberculosis. The generalized tuberculosis involving inguinal glands, mesenteric glands, spleen and lungs was more extensive in the control animals than in the sun treated where the disease had not apparently extended beyond the mesenteric glands except in one animal where the degree of involvement was comparable to that in the control animals.

The conclusion to be drawn from this experiment would seem to be that the effect of the direct rays of the sun, on experimental tuberculosis in the form of subcutaneous abscesses on the backs of guinea pigs, as demonstrated in this experiment was curative and healing. The inference is, that, some of tubercle bacilli were killed or restrained in their growth. It was not demonstrated that all the tubercle bacilli were sterilized in any one of the abscesses as formed and exposed to the direct rays of the sun under the conditions of this experiment.

DISCUSSION.

Dr. J. F. McConnell, Colorado Springs, Colo.

Mr. President and Gentlemen: I am sure that we have all very much enjoyed the able paper by Dr. Twitchell. Experimental work is the keynote to the situation in learning anything of tuberculosis. We hope in the future to have such experimental data as will greatly enlarge and govern our means of activity in the treatment of this dreaded disease. I have been very much interested in the sun cure for tuberculosis for many years. In 1898 my attention was first directed to it by a very able paper contributed by Dr. Mitchell of Denver before the American Medical Association, in which Dr. Mitchell related the many experiments he had made. Again we have the work done in New Mexico some years ago and latterly the work of Rollier in Switzerland, which has placed Heliotherapy prominently before the profession.

The advantage of the sun in the treatment of surgical lesions of a tuberculous character, has been well shown by the results obtained at Sea Breeze, Coney Island, New York, where there is well equipped institution for the treatment of surgical tuberculosis.

Whether the sun has a direct action on the lesion itself or whether the resistance of the patient is improved has not been experimentally decided. In Colorado Springs, we see very few cases of marked surgical tuberculosis. Occasionally we encounter it in children and in such patients the power of direct sunlight has been extremely well shown.

I trust that the future is going to show very promising results in the type of cases which we have been discussing.

Dr. E. A. Duncan, Silver City.

The work of Bartel in Europe and of various investigators in this country has shown that a lymphocytosis is a defensive reaction against tuberculosis. With these facts in mind we have taken up some experiments at the Albuquerque Sanatorium to see whether sun-baths affect the lympho-

cyte count. Up to the present we have had about thirty blood counts on some seven patients. Of course this number has been too small to draw definite conclusions, but the results seem to show that after sunbaths of from one to one and one-half hours duration a leucocytosis occurs in about 75 per cent of the cases and in practically all cases a relative increase in the lymphocytes of from 4 to 11 per cent. There was no considerable rise in temperature after these sun-baths.

In the past few days we have made blood pressure estimations on these patients before and at the end of the sun-bath. Practically all showed a fall in blood pressure, which would indicate that there is no paticular danger in exposing patients with a tendency to hemorrhage to the sun's rays.

Dr. Twitchell's Paper. Discused by Dr. Cipes

In regard to Dr. Brown's suggestion, It seems that very often we don't believe ourselves. The beneficial effect of the direct rays of the sun upon tuberculosis is well known, as it has been demonstrated in varrous places, so why should we pay a man to make the same experiments?

What we want to do, I believe, is simply tto convince the people in the east that we have the sunshine.

Closed by Dr. Twitchell.

I don't know that I have anything to add at all to Dr. McConnell's general discussion of the subject. Of course the question of the clinical application of the sun's rays naturally comes to any one who has been working in the east and who comes out here and finds what this western sunshine country is. It has been my endeavor to gather some specific data that would be convincing, more so than just the general statement as to the advisability of this climate.

I think there is opportunity of experimental work along the two lines, one the absolute effect of altitude on the living organism; the other the effect of the direct rays of the sun. There is a good chance for such work, it seems to me, because there is such a confusion of testimony on the subject.

THE OPTIMUM DOSE OF TUBERCULIN.

John Francis McConnell, M. D. Colorado Springs, Colo.

Read before the joint meeting of the Thirtythird annual session of the New Mexico Medical Society and the Fourth annual session of the New Mexico Society for the Study and Prevention of Tuberculosis, Albuquerque, New Mexico, October 7th, 1914.

There is a dosage called the optimum dose which is pivotal in tuberculin therapy. The optimum doses are revealed clinically by the favorable therapeutic effects which they determine.

In cases in which the administration of tuberculin is justifiable a slow disintoxication of the system is promoted by the repeated action of the optimum dose; the weight increases, the appetite improves, strength returns and more slowly the focal signs improve. As soon as any one of the symptoms of this disintoxication becomes clinically perceptible in the course of treatment the administration of the optimum dose should be continued while its beneficial effect persists.

The idea of active immunization looms up too large in the treatment of tuberculosis. The attempt is made to reach in the course of treatment maximum doses corresponding to very strong concentrations of tuberculin on the ground that such maximum doses are alone of vaccinal value. The view is carried to the point of maintaining that very attenuated dilutions of tuber-

culin are therapeutically inactive and in order to reach quickly dilutions which are considered active, treatment is commenced with relatively strong concentrations of tuberculin.

At the outset let me emphatically state that I thoroughly believe that therepeutic tuberculin is completely out of the field of doubt and I base my faith on clinical and laboratory evidence.

As to animal experiments I quickly admit that it would be of great value if tuberculin could be firmly established on an experimental basis, but as far as I know no one has succeeded with tuberculin in curing tuberculous guinea pigs or completely immunizing normal guinea pigs against tuberculosis. I feel it incumbent upon me here to state that so far as I have been able to observe that tuberculosis in guinea pigs is not clinically that of man, nor is the experimental infection of larger animals always comparable to the mode of infection in human beings.

From a standpoint of statistical studies there is no way in which the matter can justly be considered, that is, we have on untreated cases no comparable data in which other circumstances incident to the welfare of the patient were sufficiently under control to give the statistical result a real value. Indeed, such a study of the results of any treatment for tuberculosis is almost mecessarily confined to sanatoria, en which the full control of all the circumstances must be very ideal, and the numbers of each group large. Further, it does not seem logical to draw conclusions from results obtained after the patients have left the strict conditions necessary for proper comparison. To draw up statistical results based upon the condition of patients after they have passed from full control introduces an unknown factor large enough to offset the value of the comparison.

It may be truly said that the use of tuberculin is ordinarily empirical and most of the evidence when analyzed reveals but impressions, therefore one must necessarily conclude that it is the bedside data by which tuberculing therapy must stand or fall.

Any endeavor to obtain the specific treatment for a disease rests fundamentally upon the clear understanding of the causative agent involved and upon the intricate mechanism of its action. How does tuberculin measure up to this standard? The latest scientific contribution to tuberculin treatment is that which Caulfeild and Minns of Toronto have contributed under the title of Tuberculin Treatment based upon biological data. They have shown by a complement reaction that certain patients vary markedly in tuberculin sensitiveness. The principles underlying their selection of cases and the method of administration are summed up by them as follows:

(a) To improving (or stationary) cases, where the blood test shows a full inhibitive reaction, tuberculin is given in extremely small doses, with little or no increase, at about seven-day intervals, in all cases showing marked tuberculin sensitiveness; to all cases showing a tendency to tuberculin tolerance it is given in increasing amounts twice weekly. Occasionally this selection will included cases with fever. The tentative theory is that tuberculin sensitiveness may be maintained or increased, which, together with the inhibitive reaction, is one favorable biological com-

bination, and by the second method tol erance may be aided, which with the inhibitive reaction is also a favorable biological condition.

- (b) Cases whose blood shows complement fixation (to the alcohol-ether antigen) are never given tuberculin while this phenomenon remains
- (c) Certain cases whose blood test gives an indifferent result or merely a trace of the inhibitive phenomenon, present insufficient data for an exact selection of either method. Either method may be used according to one's judgment of which combination would likely develop under improvement. Further, as many of these biological results may be found with different clinical pictures, it is often not only a question of what method, but also whether tuberculin should be given. In our opinion usually it should not.
- (d) It has been found by practical experience that those showing the second combination under heading (a) stand with benefit slight general reactions. For the second method we have used Koch's old tuberculin for the first bacillen emulsion.
- (e) It will frequently be found that cases giving the combinations under heading (a) do not do as well as might be expected. In these cases we think we have a direct indication for autogenous vaccines. (2).

Tuberculin does not directly neutralize or inhibit any poison, it is not autitoxic nor is it bactericidal in the sense that it directly and immediately exerts a pernicious influence on the tubercle bacillus. However, this we do know that tuberculin possesses a marked characteristic specificity being the production of a certain reaction when injected into the tuberculous the features

of which are as you well know local, focal and constitutional.

One may successfully controvert the theory of antibodies and the presence of antituberculin of Wasserman, but the specificity of the tuberculin reaction and that it is due to the contament tuberculo-protein has been conclusively proved.

The choice of a preparation. It has been shown that the substance which produces the specific reaction is the protein of the tubercle bacillus, so that any product containing this protein fulfils the condition.

Tuberculin may be conveniently considered in three groups according to the methods of preparation, namely

- 1. Extract O. T. for example.
- 2. Endoplasm. T. R. for example.
- 3. Extract plus Endoplasm. B. E. for example.

They are all satisfactory tuberculins if they contain tubercle bacillus protein and the test of the presence of the protein is their ability to produce the specific reaction. It being generally conceded that the tuberculin reaction is a hypersensitive one, similar to the hypersensitive reaction to other foreign proteins, it is an advantage to have the protein as pure as possible and free from admixture of other proteins. The idea of preparing a tuberculin from a culture grown on an albumose free medium has been worked out, and placed on the market by Meister Lucius and Bruning: This preparation known as A. F. emphasizes the value and growing importance of the albumose free preparation.

I have for years used O. T. B. E. and B. F. but latterly most of my pa-

tients have received A. F. It is worth remembering that there are patients displaying marked sensitiveness to one preparation who will tolerate another satisfactorily.

Tuberculin is usually injected under or into the skin, though the oral method of administration has in my experience given good results, especially with children. In the matter of dilutions it is worth while stating that one should prepare his own, and I would urge especially that they be not only sterile but constantly of uniform potency. No dilution of tuberculin can comply with this provision if it is older than three weeks.

In order to avoid the risk of going beyond the optimum dose, which is often very minute at the beginning of treatment, the following indications may be of guidance:

- 1. The weaker the dilution that yields a response the more precarious is the general condition of the patient, and the more marked are the lesions.
- 2. The motif of tuberculin therapy is time—a method of treatment which only slowly realizes its therapeutic enfects—It is desirable therefore to state before commencing treatment that tuberculin must be continued for at least six months.
- 3. By injecting a small quantity of diluent, in this way the psychology of the patient may be estimated. It is well to give at least two injections in this way. I have found that the administration of tuberculin develops two types of patient, one is prone to attribute every symptom of the interval to the tuberculin, the other is most refuctant to admit even a reaction. The ad-

ministration of the diluent alone is of value in differentiating the types.

The experienced tuberculin therapist will very soon classify the patients receiving specific treatment into three groups in respect to their hypersensitiveness, namely the highly sensitive, the moderately sensitive and the weakly sensitive. The ideal method therefore of estimating accurately the optimal dose for beginning treatment is along the lines mentioned.

The empirical method consists in the administration of 1-20 c. c. of the dilution which experience and judgment have taught us will produce no reaction. Repeat the administration at weekly intervals until the optimum dose is reached, thereafter increase the preceding dose of tuberculin by 1-20 c. c. When the optimum dose shows itself by a favorable therapeutic effect, however slight, keep to that dose as long as its favorable action persists.

In the course of treatment reactions should be avoided. Reactions are the evidences of an excess of tuberculin and indicate that the optimum dose has been passed.

With the observance of these indications, tuberculin therapy becomes a perfectly safe method of treatment, and the maximum curative properties of tuberculin are at least utilized; amelioration where arrest is impossible cannot be demanded of tuberculin therapy in all forms of tuberculin therapy in all forms of tuberculin has only a limited curative power. In fact, tuberculin is best described as a whip to the patient's natural protective powers and it is especially a favorable factor in those patients of the rocking-

horse class going up and down making no progress, yet declining but slightly. Stated broadly, only those patients are susceptible of amelioration or arrest in whom the means of defense under the specific stimulant action of tuberculm are still in a condition to master the bacillus, to destroy the toxins and to cicatrize the lesions which the bacillus has provoked.

Unfortunately we have no means of foretelling whether a course of tuberculin will be therapeutically successful even in a relative degree, we cannot know the result until the trial is mage.

The less effectively an organism defends itself against tuberculous infection, the less also will be the success with which the use of tuberculin is followed. This is why treatment with tuberculin is not justifiable in those acute forms of tuberculosis which at the onset cause a profound lowering of the general condition and a rapid invasion of the organs, nor should it be used for those tuberculous patients who after a more or less prolonged resistence have exhausted their defensive resources and whose dissolution is imminent.

One cannot repeat too often that the chances of success in tuberculin therapy are increased by intervening as soon as tuberculosis is diagnosed or even suspected. It is in these circumstances that tuberculin exerts its specific effects, and the best and most lasting results are achieved.

- 1. Biological Curves in Tuberculosis. Caulfeild and Minns.
- 2. Tuberculin Treatment Based Upon Clinical and Biological Data. Caulfeild and Minns.

818 North Cascade Ave.

DISCUSSION.

Papers by McConnell and Peters. Discussed by Dr. Cipes.

(Dr. Peters' manuscript not furnished for publication).

I appreciate very much both papers and really can not find anything to criticize in either one of them, as much as I want toone of them at least. I have been giving tuberculin now for four years, using the various kinds, especially B. F., and I believe that very many cases have improved under the treatment. I have been accustomed for the past two years to try the same method Dr. McConnell has suggested in his paper; to make a study of the patient, and note how he is affected by the treatment. I have found quite a number of cases, particularly among the female sex, that after injections of ½ 0-0 Phenol solution often showed symptoms of reaction, which were due simply to the imagination, for I knew that I had not given anything to cause a reaction.

Regarding the selection of cases, I believe that we are unable to select certain cases for tuberculin treatment, because we can never tell when a case will do well and when it will not. My method at the present time is to try the hygienic-dietetic and open air treatment on the patient for a period of four or six weeks and see how he gets along, If he progresses without tuberculin I do not give it, but if no improvement is made, I start tuberculin. I am using practically the same method of administering it that Dr. Peters has mentioned in his paper. I assure you that I have enjoyed these papers very much, and I thank you for them.

Dr. McConnell's Paper. Dr. Peters' Paper. Discusion opened by Dr. Bruns.

Mr. President: I think it very unfortunate that I was chosen to discuss two papers on tuberculin, because it is a subject I know little or nothing about. We use tuberculin

very little at Fort Bayard. From time to time we have selected groups of cases and tried tuberculin, but almost invariably ended, in a couple of months, in getting no results. We had to give it up. Of course, with so little experience, I would not want to condemn a remedy. We can not ignore the good results that so many able workers in tuberculosis have obtained with tuberculin. I have listened to these papers with a great deal of interest and am certainly glad to have the opportunity to hear them.

Discussion: Dr. Prentiss.

I understand Dr. Peters to say that when a guinea pig survives, that it is not possible to reinfect it, but by injecting sputum containing large numbers of tubercle bacilli, it occurs with great difficulty, but it can occur. I am a great believer in tuberculin in many cases, but I think tuberculin treatment as a whole has been a disappointment, although it has been very beneficial in many cases.

IMMUNITY AND TUBERCULOSIS.

Joseph S. Cipes, M. D.
The Cipes Sanatorium, Albuquerque,
New Mexico.

Read before the joint meeting of the Thirtythird annual session of the New Mexico Medical Society and the Fourth annual session of the New Mexico Society for the Study and Prevention of Tuberculosis, Albuquerque, New Mexico, October 7th, 1914.

In taking up the question of immunity it is perhaps advisable in the beginning to define a few general terms which are used in connection with this

subject and to which I shall have occasion to refer in my paper.

By immunity is meant the power to resist disease. It may be either natural or acquired, and the acquired form is divided into active and passive immunity. When we speak of natural immunity, we mean that the power of resistance is inherited by the offspring from the parents—a condition which is common to certain races of men and species of animals.

The term acquired immunity signifies that the resisting power is obtained after birth. Active immunity is that power of resistance which may resurt from an attack of some acute infectious disease, and which is created by the action of the cells within the body upon the bacteria, either destroying or injuring them. This form lasts for a varying period—a short time following cholera or typhoid, and a life time usually after an attack of smallpox.

Passive immunity is that form which is produced by the introduction of foreign substances into the blood, such as the injection of the serum from an immunized person or animal into the blood of a non-immune.

When we consider the subject of immunity in its relation to various diseases—particularly the disease of tuberculosis—we must bear in mind that the term is only relative. By this I mean that when we say a certain individual or race is immune to a certain disease, it does not necessarily imply that the individual or race will not contract that particular disease, for the degree of immunity may be reduced under various conditions, such as injury, exposure to abnormal temperatures, insufficient food, 'unhygienic

surroundings, etc., while on the other hand the degree of immunity may be increased under favorable living conditions.

Considering the prevalence of tuberculosis, and knowing as we do that the direct cause of the disease is the tubercular bacillus alone and not its toxin or any other of its products, we must conclude that it would be even more wide-spread than at present were it not for the immunity which is possessed by the majority of human beings.

The subject of immunity may be treated as an individual or racial characteristic. I have chosen in this paper to discuss it briefly in its twofold aspect, confining myself chiefly to such personal observations as I have made during the past few years in my practice among tuberculous people, and the conclusions which I have reached in my study of them.

A discussion of the theory of natural immunity as an individual characteristic naturally resolves itself into a consideration of the influence of heredity upon immunity, and the question arises Is the resisting power of the offspring of tuberculous parents increased or diminished, or does heredity in such cases act as the etiology of tuberculosis?

In considering heredity as a possible etiological factor of tuberculosis we must take into account the following facts; the tuberculous bacilli would have to be transmitted from the parent to the offspring through the ova or sperma if at the time of copulation or through the placenta if intrauterine.

Infection through the sperma may occur when the urogenital tract is affected, but such cases are so rare as to maternal circulation to the foetus through the placenta. Knowing also as we do that tuberculosis is a bactertmia, it is easily conceivable that the bacterial proteins may affect the composition of the seminal fluid.

In my estimation the transmission of the toxins or proteins from the parent to the offspring corresponds to the injection of tuberculin into the system, and the effects produced are practically the same in both instances.

We know that when administered in excessive doses tuberculin usually proves harmful, but when comparatively small doses are given there are no harmful effects, and very often transmission is possible only under rare and abnormal conditions and that its inevitable result is very early death, it is evident that the vast number of tuberculous people in the world have not inherited the disease, and that, therefore, heredity plays practically no part as an etiological factor of tuberculosis.

It is the general belief that children born of parents, one or both of whom are tubercular, will be weaker and more predisposed to the infection of tuberculosis than children born of healthy parents. My opinion, the reason for which I shall give later, is that this is true only when one or both parents have tuberculosis in an advanced stage.

While it is true that the transmission of the bacilli through the ova, sperma or placenta is possible only under rare condition, it is, however, entirely possible for the tuberculous toxin or the protein of the tuberculous bacilli to pass by diffusion or osmosis from the

be of little import. In order for the bacilli to be transmitted through the ovum they would naturally have to be present in the ovary, but thus far to the best of my knowledge no one has found the tubercular bacilli in the ovary, and until such a discovery is made we may exclude the probability of infection through the ova.

The only probable avenue of transmission for the bacilli from the mother to the foetus would, therefore, be through the placenta. We know, however, that the maternal circulation is entirely separate from the foetal circulation and that the placenta acts as an impenetrable filter for bacteria as well as for corpuscular elements.

Placental transmission would be possible only under certain pathological conditions, viz: far advanced tuberculosis with amyloid degeneration of the various organs, or generalized tuberculosis and pyrexia, and even then the following pathological changes would have to take place: disintegration of the placental villi, rupture of the placenta, and such a great number of bacilli present in the maternal circulation that the germs may reach the ruptured spot in sufficiently large numbers to infect the foetus.

Assuming that transmission of the bacilli through the placenta might occur under the above conditions the ultimate result would necessarily be one of three things—the death of the mother before the maturity of the foetus, premature birth and death of both mother and child at the time of parturition, or the death of both shortly after the birth of the child.

Considering then that placental

most favorable results are obtained.

Similarly, my belief is that when the tubercular proteins or toxins that are transmitted from parent to offspring are small in quantity they produce a gradual increase of the tolerance or immunization of the child, while if these substances are in excess the results are poisonous.

Although my personal observations along this line have been made in a comparably short period, and the cases noted have not been sufficient in number for statistical purposes, I am led to believe that the following general rules will hold good in the majority of cases:

- I. If the mother has a mild infection and the father is well, the child will be born well and will probably be immune to tuberculosis.
- II. If the mother has tuberculosis in the moderately advanced stage the child will be born well, and will remain well.
- III. If the mother has the disease in the far advanced stage, the result will be the death of the foetus or the death of the child at birth or shortly afterward.
- IV. If the father has tuberculosis even in the advanced stage and the mother is well, the child will either be immune or not influenced at all.
- V. If both parents have a mild mfection the child will be born well, but may be generally weak.
- VI. If both parents are in the advanced stage the result will invariably be the death of the foetus, or the death of the child at birth or shortly afterward.

Immunity as a racial characteristic presents a most interesting subject for study. It is hardly possible, however, in this limited time, to discuss the many races of the world in their relation to immunity. I shall mention only a few in illustration.

It is a well known fact that the Irish have a very low degree of immunity. Often do we find an entire family afflicted with tuberculosis, and in a large percentage of cases the disease terminates fatally, the victim succumbing in a short time. The negro is very easily affected, and seldom recovers. The same is true of the American Indian, while the Hebrew race, on the other hand, has an unusually high degree of immunity.

In the forepart of this paper I stated that the immunity of an individual or race may be increased or diminished under certain conditions.

In my opinion when any people marry almost entirely within their own race the result will be in time a lowering of the resistance of that race to disease, and it is my belief that in the races I have just mentioned, especially the Negro and Indian, the low resistance to tuberculosis can be traced very largely to the lack of intermarriage with the people of other races.

Rated according to the prevalence of tuberculosis among them the Indian stands first, the Negro second and the Irish third.

The fact that the American Nation possesses a higher degree of immunity than any other nation, in spite of the irregular and excessively strenuous life of its people, is due, I believe, to the unique position of America as the great

"melting pot" of the world. Here all the races of the globe commingle, and intermarriage is the general practice among the various white peoples. A possible exception to this custom is the Tew, who is inclined more or less to marry among his own people and, more than that, his own blood relations. It would seem that the high degree of immunity possessed by the Jews contradicts the idea of harmful results not only from marriage within the race. but also from consanguineous marriage, which is a recognized factor m the lowering of resistance to disease. I have noted, however, that tuberculosis seems to be of less frequent occurrence in those Jewish families whose history shows a record of intermarriages, and I believe that the disease would be even less frequent among the Jewish race were it not for their marriage customs.

The Jew is probably subjected to the various predisposing causes of tuberculosis more than any other race. Besides the fact that he bears the stamp of the ceaseless persecution of centuries, he has a natural tendency to develop the mind at the expense of the body. The majority of the Jews are town dwellers, and in this country workers in factories or the so-called "sweat shops," where hundreds of them congregate in small rooms badly ventilated and admitting very little, if any, sunshine. Such quarters are fertile breeding places for the tuberculous bacilli, and tend to weaken the resistance of those working in them, making them more ready victims to tuberculosis.

In the face of these facts how can we account for the comparatively high immunity which this race possesses? Various theories have been advanced in evplanation, the most important of which are the infrequency of alcoholism among them, and the care which they exercise in the selection and the inspection of meats, a precaution which is supposed to render them less liable to bovine infection.

Personally I can not see where either of these theories holds good. In the first place while it is true that inebriety is rare among the Jews, they indulge in the use of alcoholic liquors to a moderate extent, neither more nor less, I believe, than the average race.

In the second place that the bovine bacilli should cause pulmonary tuberculosis through the ingestion of meat from a tuberculous animal is hardly plausible. Supposing this idea were worthy of credit, why do we find more tuberculosis proportionately among the Orthodox Jews who adhere strictly to the law regarding the selection and inspection of meats?

Taking into consideration all the facts in regard to the Jewish race, one is compelled to believe that there is more substance within the system which is responsible for their strong resistance to tuberculosis. Whether this substance is in the blood, lymph or glands is a problem which has not yet been solved.

That active immunity in tuberculosis may be acquired is a recognized fact. The best known and most widely used means of producing this form of immunity is tuberculin. When carefully administered either hypodermically or by ingestion in selected cases, it leads often to the arrest of the disease and

many times to a cure. It also diminishes the liability to a reoccurrence of the disease.

This theory has also been illustrated by a method of auto-inoculation introduced by Dr. Patterson of England, which consists of putting the patient on exercise and work under the most careful regulations. By this means a reaction of the blood is produced, due to the absorption of the toxins from the diseased area. Many favorable results have been obtained by Dr. Patterson and others.

In regard to passive immunity very little has been accomplished, although numerous experiments have been made by the use of various serums, and successful results reported by the experimentors. These reports, however, have thus far not been substantiated by other workers along these lines who have tried the same methods.

DISCUSSION.

Dr. J. F. McConnell, Colorado Springs, Colo.

I am sorry not to have been here for the reading of the paper but I was inveigled into going to see this wonderful Fair.

This question of immunity is undoubtedly the most interesting phase in today's practice. There is no doubt that in dealing with the living bacillus we have the only means of obtaining immunity. Other methods do not produce any real, lasting, immunization. An interesting point in immunological work came to me last Spring during an epidemic of measles in Colorado Springs. Among the children infected were some who had previously been subjected to the vonPirquet test with positive reactions. They were again subjected to the innoculation with a negative result. Of course, that is well known to you. The point is that this immunity being lost under certain conditions.

Whether we are going to gain by injecting the living organism and replacing the immunity, or whether we are going to follow the idea of natural immunity which is obtained by repeated vaccination, is a question of present moment. It seems to me that the concurrence of opinion today is along the line of immunity which we obtain by natural means. We all know that the tuberculin reaction in a child of one to two years of age is of great significance while a positive reaction in later life has not the same significance. I think that one is safe in concluding that our natural immunity will protect under ordinary circumstances and that it is only when tolerance is ruptured that infection makes the ravages which we so constantly deplore.

Paper Read by Dr. Cipes, Discused by Dr. Prentiss.

I enjoyed this paper very much, indeed, and he has touched upon a number of points that I will not discuss, but will discuss some others, also that seem to me to be of importance and interest. The authorities say that of all patients dying in hospjitals, a very large percentage is found in which tuberculosis has at one time existed, and whether this percentage be 90 or 95 it doesn't make much difference, but the fact remains that there are some cases in which there is no tuberculosis, and cannot be discovered anywhere. This is proof, I think, that in those cases in which tuberculosis cannot be found there is a high grade of natural immunity, because we know that all people many times are thrown in contact with tubercle bacilli, breathe them in or swallow them and yet do not react to the most delicate tuberculin tests. That is proof to me of very strong natural immunity; otherwise infection would have occured. Now, the object of treatment in such cases is to stimulate this natural immunity, whether we call it active or passive acquired immunity, it is the same thing. The acquired immunity is, of course, obtained very largely by the absorption of the bacillae or their products, hygiene, good food and medicine, etc; in other words to bring the patient's strength up to what it

should be or to what is commonly known as increased vitality in any individual disease; that means just the increase of the natural immunity against the organism in question. I believe the sun light is beneficial and the value of that when properly used has been under-estimated, and that is not sufficiently used. The value of artificial pneumo-thorax is represented by diminuation of movement of the lung. Now, as far as the immunity produced by the injection of tubercule bacilli is concerned, we might divide the subject into two heads; the injection of living and dead bacilli. In Colorado Springs Dr. Webb has originated a method of injecting living bacilli one at a time and claims fair results. I haven't heard much of that method lately and would like to ask Dr. Mc-Connell whether he is still obtaining satisfactory results or not. These two, of course. are logical and the immunity obtained from the living bacillae is very much greater than obtained from the dead bacillae. The danger, of course, of injecting living bacilli, those which have been attenuated or weakened, or their infecting qualities diminished by passing through different animals, is in a restoration of their pathogenic qualities. Friedmann claims that his attenuated tubercle bacilli have still the immunizing power of living bacilli, but have lost their pathological qualities in which, by the way, I understand that clinical results do not back him up, because in some cases, at least, the living bacilli injected have become active. His idea, though, is along good lines and I believe that the reasons for his failure were two, that he was a little bit too ambitious; he tried to give too big doses, and personally, I think he injected those doses in the wrong place; also he tried to cure the patient by too few injections. I believe that if he had started with small doses, had regulated them at intervals by the results obtained in each individual case, and had continued to give gradualy increasing doses until the patient improved or recovered, he might have obtained good results. The unfriendliness of the medical profession toward him was not on account of his theory, as I understand it, but was on account of his unreasonable claims, and the harmful effects of the treatment in certain cases, and

also to the fact that many medical men believe that he made claims that he knew to be incorrect; that many of these patients were milked of their money, being persuaded to put themselves under his treatment on account of claims which seemed to be unethical. Another method of treatment is autoserotherapy, that I believe is used too little, in case in which there is a collection of serous fluid in the chest. The needle is inserted into the pleural cavity, the syringe filled, and before removal of the needle it is inserted into the subcutaneous tissue, and a certain amount injected. There have been some very good articles on this subject in the last year or two, and I believe the results warrant the more free use of the method. The time when people are infected is very frequently in childhood, of course, particularly following severe attacks of pneumonia, measles, grip or whooping cough. Now, this has a bearing on subsequent attacks of tuberculosis: the question arises when a person gets symptoms at 25 or 30 years of age, whether or not it is a new infection or lighting up of an old infection; of course, I do believe that it is one or the other, in every case. In many it is a lighting up, and in a good many, also, I believe it is a new infection. It has been shown in animals that if you inject a small dose of tubercule bacilli and it recovers, that it is very difficult to re-infect after that, and the discussion this morning tends to the belief that such a reinfection cannot occur. I believe it can be done and is done. You take a guinea pig and inject a few tubercule bacilli, and that pig recovers; then inject a large number of bacilli into the peritoneal cavity and the pig is overwhelmed. If that be the ease with a pig, it seems reasonable that it could happen with other animals, and that it could be true also in the human being. Now, if a child gets tuberculosis and recovers without any particular trouble, and as a man symptoms break out, it is a question of whether it is the old infection or a new one; now, if that person has had a severe illness, becomes run down and weakened from family troubles or other causes, and the infection becomes lighted up, it is evidence that the immunity has very much diminished or broken down. In this weakened condition, why is he not

just as susceptible to a new infection as to a lighting up of an old infection, and I believe that the new infection occurs much more frequently than some physicians believe, and I believe that that should have a bearing on Dr. Brown's paper in mercantile life. These people are working hard, frequently have poor nutrition and in spite of an old healed lesion, I believe that they can very easily acquire a new infection, and I believe that occurs in a great many instances. This new infection, however, is acquired with a great deal of difficulty, very much more so than a patient who has never had it.

Dr. Cipes' Paper Discussed by Dr. Bruns.

I was very much interested in Dr. Cipe's paper, especially that part of it where he speaks of racial immunity. It brings up there the question of the soil in tuberculosis. which I think is very important. In my remarks this morning, in discussing Dr. Brown's paper, I tried to bring out that point, but I am afraid my remarks were incomplete. I believe it is a good plan to take precautions against infection in tuberculosis, but I believe the most important thing is the soil. Now, in regard to the children of tuberculous parents, although there is no inherited tuberculosis, where the parents are tuberculous and careless the child is exposed to repeated infections. It takes a long time for immunity to be perfected. After the child once becomes immunized I do not believe there is any danger of infection from without. Until the child has received immunity I believe large or repeated small doses of tubercle bacilli are dangerous. I think the reason animal experiments have failed is that the experimentors have not allowed sufficient time to take place between the injection of the first and the second dose. I think this would explain a great many failures in immunizing animals. I believe after the child once becomes immunized against tuberculosis germs there is no danger of infection and I therefore believe there is very little canger of the transmission of tuberculosis from one adult to another. Of course there are some adults who have passed through life without being immunized, and these exceptional cases are the ones we have to look out for. We have to be careful about infection on this account and on account of the child who is still unprotected.

Dr. Cipes in Closing.

I really have nothing to add, as you all seem to agree with me, and I do not want to disagree with myself. However, I may say, that in my opinion the theory that the infection of adults is not very probable, is foolish, and I believe that we ought to be a little more cautious in bringing such an idea before the public.

We know that since the inauguration of the campaign of the National Anti-Tuberculosis Society, tuberculosis has been on the decrease in this country, and I believe this is due to the fact that the public has learned to be more careful regarding their surroundings and habits of living. If this be so, then we certainly should be very careful about spreading abroad the idea that the adult can not be infected. Such an idea would cause many people, especially those without children, to consider any measures of precaution as unnecessary.

Regarding the effect of climate on immunity there is probably nothing new to say. We all know that good climatic conditions act as a stimulant to the tuberculous, increasing their power of resistance. The sunshine also acts as an antiseptic agent, destroying the bacilli.

I believe that considering the poor living conditions of the Mexicans and Indians, there would be much more tuberculosis among them here in the southwest than there is were it not for the favorable clibate. In fact I believe the Indian would become almost extinct here as he has in the eastern States.

ARTIFICIAL PNEUMOTHORAX
IN THE TREATMENT OF
TUBERCULOSIS.

Captain Earl H. Burns Medical Corps, U. S. Army. Fort Bayard, New Mexico.

Read before the joint meeting of the Thirtythird annual session of the New Mexico Medical Society and the Fourth annual session of the New Mexico Society for the Study and Prevention of Tuberculosis, Albuquerque, New Mexico, October 7th, 1914.

The employment of artificial pneumothroax in the treatment of pulmonary tuberculosis has received of late such prominence in medical literature, that in a general way this subject must be a familiar one to all practitioners of medicine. It will, therefore, not be necessary to enter into an exhaustive exposition and the scope of my paper will be confined to a brief report on a number of cases treated by this method at Fort Bayard and a discussion of some of the more important features connected with it.

Our series comprises 26 cases, in 6 of which no compression was obtained and the treatment had to be discontinued on account of universal pleural adhesions. This leaves only 20 cases to be considered. I realize that no definite conclusions can be drawn from so few cases, but viewed in connection with the result of others, I have been able to obtain certain inferences of

value to myself and perhaps of some interest to others.

The following is a report of our cases up to date:

Case I. Corporal B. Whole of lett lung actively involved, with cavity at apex. For five months prior to pneumothroax treatment, patient had been bedridden, having fever and repeated hemorrhages. Following compression, the temperature fell to normal, bleeding ceased, cough and expectoration disappeared and sputum became negative. Fourteen months after compression, patient was working in a corral without any ill effects. Filling was discontinued at the end of eighteen months. At the present time, twenty months since the beginning of treatment, he is in good health, no cough or expectoration, sputum negative, has gained five pounds in weight and examination shows heart in normal position, reexpansion of the compressed lung with a thickened and partially adherent pleura but no signs of activity.

Case II. Mus. T. Cavity at apex. At first no compression was tried in this case, as it was believed that the lung was surrounded by universal aghesions. Finally the patient had a series of severe hemorrhages and was in grave danger of bleeding to death. Pneumothroax treatment was then attempted as a last resort and a slight compression was acquired, sufficient to check bleeding. In course of time, however, compression had to be discontinued, as the small pleural space obtained, became obliterated by the contraction of adhesion. Hemorrhages have never recurred and the patient is doing nicely, it are a property as a statement

These two cases not only show the

good results of compression, but demonstrate particularly its value in checking uncontrollable hemorrhage.

Case III. Private F. Whole of right lung densely and actively involved with a large cavity in upper part. Patient was having high fever and was in an extreme condition. Besides pulmonary involvement he had an ulcerative tuberculous laryngitis, was completely aphonic and also had a suppurative otitis media of the right ear, After compression, the whole clinical picture changed. Temperature fell to normal, cough and expectoration decreased, strength was regained, larvngeal ulcers healed, voice neturned, ear ceased discharging, and from being a bed-ridden, weak and dying man he was transformed into an ambulant patient. Had it not been for a number of complications, the result of pneumothorax treatment in this particular case would have been a most brilliant one, Firm adhesions over cavity in upper part of lung prevented its compression. This cavity continued to secrete pus and finally an attempt was made to compress it by resecting the upper ribs according to Wilm's method. This was only partially sucessful. A large pleural exudate also developed on pneumothorax side and the patient had two attacks of dry pleurisy over the good lung, which cleared up without any signs of involvement of the parenchyma. At the present time, after twenty-two months compression the patient is in fairly good general condition, has very little cough or expectoration, left lung appears normal and right lung remains compressed with the exception of the cavity, which is shrunken as result of contraction of thorax from rib resection.

Case IV. Lieutenant O. Left lung had been compressed in a private sana-Upon admission to Fort Bayard, the patient was extremely prostrated. An effort was made to continue the pneumothorax treatment, but very little gas could be introduced and was followed by prostration and great discomfort. Radiograph of chest showed an enormous cavity in the upper part of the left lung which was surrounded by firm adhesions and could not be collapsed. Only a small part of the lower lung was being compressed. Treatment was discontinued and the patient finally died. The autopsy revealed the upper two-thirds of the left lung to be a cavity and the lower part of the lung composed of connective tissue, caseous masses and small cavities. In the right lung, there was an old fibrous focus at the apex and extending outward from the hilus various sized fibrous and caseous tubercles.

Although Private F. practically owes his life to pneumothorax treatment, both cases emphasize the liability of old cavities to be surrounded by dense pleural adhesions, thereby preventing their compression and interfering with successful results. It is impossible beforehand to tell exactly the extent and firmness of these adhesions. In regard to operative intervention, in such cases, our surgeon, Captain Loving, does not consider the Wilms operation radical enough and believes the whole rib should be removed.

Case V. Private P. Active involvement of entire right lung, with cavity in the upper lobe. Marked constitutional symptoms. After compression temperature was reduced, cough and expectoration decreased, but the patient lost weight. Five months after

beginning of treatment a large cloudy exudate developed, which on account of compression symptoms had to be aspirated from time to time. Marked improvement followed the appearance of this exudate, temperature became normal, patient gained weight, cough and expectoration ceased and bacilli disappeared from sputum. At present with seventeen months of compression patient is working and in good condition.

Case VI. Private R. Active involvement of entire left lung. High evening temperature and other marked constitutional symptoms. Compression followed by reduction of temperature to normal with occasional rises due to attacks of pleurisy. Cough and expectoration decreased, but there was a gradual loss in weight. Finally a large pleural exudate appeared associated with improvement in all symptoms, including a gain in weight. At present, after nine months of compression patient is running a normal temperature, has scarcely any cough and expectoration, is gaining weight and taking exercise.

Case VII. Sergeant K. Large active involvement of entire left lung, but mild constitutional symptoms. As patient did not improve under ordinary treatment the left lung was compressed. For the first eight months he felt much better, temperature remained normal, cough and expectoration disappeared, appetite improved, but weight continued the same. Then the patient began to have fever, loss of appetite and weight. A large cloudy exudate, swarming with tubercle bacilli, appeared at the same time. After a filling, gas escaped under the skin, carrying with it some of the exudate, which produced an abscess. A second abscess formed, following an aspiration during which a bit of fluid was forced out subcutaneously. These abscesses finally burst leaving sinuses. Coincident with the abscess formation, a marked improvement occurred. Temperature fell to normal, cough and expectoration ceased and the patient gained eleven pounds in weight. A pleural exudate still remains.

The last three cases show the marked improvement that may follow the development of a pleural exudate in artificial pneumothroax. This same improvement is often noticed when an ordinary sero-fibrinous pleurisy occurs in pulmonary tuberculosis.

Case VIII. Private O. Active involvement of upper part of right lung which slowly progressed with fever and loss in weight in spite of five months careful hygienic treatment. After compression temperature fell and remained normal. Cough and expectoration decreased and all other symptoms improved, including finally a slight gain in weight. At present this patient has been compressed for one year, is exercising and in good condition.

Case IX. Sergeant P. Active m-volvement of greater part of left lung. Fever of over six months duration in spite of rest in bed. Compression followed by immediate subsidence of temperature to normal, decrease in cough and expectoration and gain in weight of eight pounds. After seven months of compression patient is in excellent condition and taking exercise.

Case X. Private S. Large active involvement of most of left lung wth cavity at apex. Marked constitutional symptoms. No improvement during one month of ordinary treatment. Compression followed by normal tem-

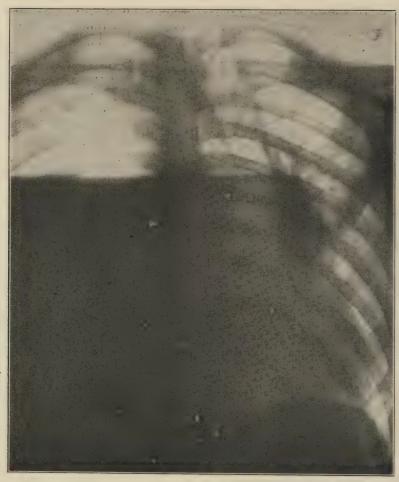


Fig. 1. (Rad. by Dr. Callender.) Case 6. Showing large pleural exudate and extreme displacement of heart and trachea.

perature, reduction in cough and expectoration, increase in strength, but a slight loss in weight. After four months compression, patient is taking exercise and doing well.

Case XI. Private F. Large active involvement of entire right lung, with cavity in upper part. Tuberculous laryngitis. Marked constitutional symptoms. Compression followed by normal temperature, decrease in cough and expectoration, gain in weight and im-

provement in laryngitis. Compression of two months duration.

Case XII. Corporal B. Large active involvement of most of left lung. Disease progressed and temperature remained elevated for four months in spite of strict rest treatment. Follow-lowing compression temperature fell to normal, cough and expectoration decreased but patient still continued to lose weight. After three months of pneumothorax treatment, he left the



Fig. 2. (Rad. by Dr. Callender.) Case 17. (Patient lying down.) Showing large pleural exudate and marked displacement of heart and trachea. Lung is greatly collapsed.

hospital in good condition, able to take considerable exercise without any ill effects.

Case XIII. Private A. Large active involvement of most of right lung and marked constitutional symptoms. Three months after admission patient was much worse. Right lung was then compressed, followed by fall in temperature to normal, reduction in cougu and expectoration. He gained strength but lost weight. At present, six months

after beginning of compression, patient is doing well with the exception of some disturbance of digestion. Just after a filling he loses his appetite and has an uncomfortable feeling in epigastrium for several weeks.

Case XIV. Sergeant H. Large active involvement of entire left lung. Severe constitutional symptoms and a tuberculous laryngitis. During seven months of the ordinary sanatorium treatment, patient had made no im-



Fig 3. (Rad. by Dr. Callender.) Case 17. (Patient sitting up and with some gas removed.) Showing same exudate as in Fig. 2 and more expansion of lung.

provement and was having frequent distressing attacks of pleurisy on left side. After compression pain entirely disappeared, laryngitis improved, temperature fell to normal, cough and expectoration decreased but weight remained the same. At present with six months of compression patient is in very good condition and taking exercise.

This series of seven cases represents the good symptomatic results of pneumothorax. They are all cases of large and unilateral involvements which had failed to improve under treatment until compression was employed.

Case XV. Cook E. Large active involvement of the greater part of left lung. During two months treatment, disease spread and constitutional symptoms increased in severity. Following compression temperature was reduced to normal, cough and expectoration decreased, but there was a loss in weight



Fog. 4. (Rad. by Dr. Callender.) Case 7. Showing large exudate with displacement of heart and mediastinum to the right. No lung visible on pneumothorax side due to extreme collapse.

of eight pounds. Patient has had a number of attacks of dry pleurisy on pneumothorax side, associated with fever and other constitutional symptoms, but at present, after seven months compression, in spite of this complication he is better in every respect with exception of loss in weight.

This case serves as an illustration of one of the common complications in artificial pneumothorax, namely pleurisy. It may occur in the dry as well as

in the wet form, is usually milder than the ordinary pleurisy, but from my limited experience so far occurs rather frequently and is the usual cause of temperature exacerbations.

Case XVI. Sergeant H. Diagnosis: bronchiectasis lower lobe of right lung. Patient was on ald case of tertiary spyhilis, with arterio-sclerosts and an emphysematous chest. Artificial pneumothorax was performed and right lung completely compressed.



Fig. 5. (Rad. by Dr. Callender.) Case 1. Showing reexpansion of lung 4 months after 18 months compression. Pleura thickened and adherent over entire lung.

Treatment had to be discontinued after several fillings on account of extreme dyspnoea.

Failure in this case was no doubt due to an emphysematous chest in which the additional hindrance of compression was imposed upon an already greatly embarrassed respiration.

Case XVII. Private A. Old, apparently inactive lesion in upper part of right lung with a recent extension in left lung. As patient was rapidly grow-

ing worse, left lung was compressed. This led to temporary improvement, but later patient became much worse and examination revealed a reawakening and extension of disease in the right lung.

CASE XVIII. Sergeant F. A rapidly advancing lasion in the right lung with marked constitutional symptoms and tuberculous laryngitis. Left lung appeared normal according to physical signs and radiograph showed nothing

except shadows at hilus found in many healthy people. Right lung was conpressed followed by temporary amelioration of symptoms, but not long afterward patient became worse. Both physical signs and radiograph revealed an extension outward from the hilus in the good lung. This extension was rapid and shortly afterward the patient developed a spontaneous pneumothorax on the good side and immediately died. Autopsy showed a double pyo-pneumothorax with both lungs collapsed against vertebra. The left showed numerous caseous and fibro-caseous foci of varying size extending outward from the hilus. In center of lung there was a cavity which had ruptured on the outer surface producing the spontaneous pneumothorax. The right lung showed a cavity partially collapsed and firm fibrous foci scattered throughout the remainder of it.

These two cases were failures as result of extension of disease in good lung, although such an occurrence could not be predicted from physical signs or radiographs.

Case XIX. Private G. A rapidly progressing tuberculosis of entire right Left lung apparently normal. High fever and rapid pulse. Compression performed soon after admission. At first temperature, cough and expectoration were decreased, but patient complained of shortness of breath and heart action became embarrassed. Heart was displaced to left nipple line. Full compression was not attempted on account of cardiac condition. At the end of a month symptoms became worse and rales appeared in the good lung. Pneumothorax was discontinued and some gas even withdrawn. tient was then transferred to another

ward of the hospital where he died soon afterward. Autopsy revealed a pale, When right chest was soft heart. opened gas escaped with a great deal of compression and pleura contained 3000 c. c. of clear fluid. The right lung was completely collapsed. The upper lobe and upper part of lower lobe was one large semi-caseous mass. The remainder of the lung was airless, had the appearance of muscle and contained a few fibrous tubercles. Mediastinum and heart were displaced into the left chest. The left lung was slightly compressed and oedematous. In the upper lobe, there was a recent tuberculous infiltration. All other organs were markedly congested.

Here we have a patient with a weak heart on admission. Pneumothorax treatment caused more embarrassment. Compression could not be tolerated and when it was discontinued and some gas even withdrawn, a large exudate, undetected, decreased enormously the remaining gas pressure and led to a fatal result.

Case XX. Private C. An acute broncho-pneumonic phthisis of left lung. The same day that compression was started the patient began to expectorate blood. The next morning 400 c. c. of gas were introduced, causing heart to be displaced to right of sternum. Hemorrhages continued, dyspnoea became marked and the heart action very rapid. Abdomen became tympanitic and heart more and more distressed. By means of an aspirating apparatus gas was removed from chest until heart returned to its normal posttion. Hemorrhages continued and the patient died the next day. Autopsy revealed a caseous tuberculous process of the entire left lung. Small cavities in the upper and lower lobes. In one of these cavities was a ruptured artery. A few new tubercles were found near the hilus of right lung. The right chamber of the heart was dilated.

This case represents a failure due to trying to compress an already almost completely consolidated lung. The primary congestion following this operation made the pulmonary condition worse, offsetting any compression the lung may have received. Displacement of the mediastinum added further embarrassment to an already weakened heart.

My personal experience with artificial pneumothorax in the treatment fo pulmontry tuberculosis, although very limited, has enrolled me among its enthusiastic advocates. It is certainly one of the most tangible procedures that we have in the treatment of this disease, but I have learned that, like every therapeutic measure, it has its drawbacks.

In the first place no one can tell absolutely beforehand which cases are to be benefited by it. As demonstrated by several of my patients, there is always danger of small foci in the other lung being lighted up and rapidly spread. Physical signs fail to divuige central lesions and the X-rays will not reveal early infiltration unless extensive. Whether a lesion in the better lung is healed, or how well it is healed, is hard to judge. Here again the Xrays are of little or no value. Thus we are obliged to trust more or less to luck in all cases. Displacement of the heart and therefore derangement of the blood supply is one of the worst hindrances to this treatment and it is difficult to foretell how it is going to affect our pa-

Artificial pneumothorax is contraindicated in the presence of a weak or diseased heart." Most of my cases lost weight in the beginning, and a number had digestive disturbances. Dyspnoea, with a few exceptions, was not as marked a symptom as one would expect, in fact most of my patients were able to exercise with very little inconvenience in this respect. Cyanosis, coldness and numbness of the hands and feet was complained of by few. A reduction in temperature, cough and expectoration was present in all cases in which the opposite lung remained normal. Patients running temperature for months became afebrile in a few days. The pronounced improvement in complications, such as tuberculous laryngitis, was a marked feature.

Recently attention has been called to the frequency of pleural exudates in cases of artificial pneumothorax and some authorities seem to be unduly alarmed about this complication. According to most observers effusions occur in fifty per cent of all cases. Muralt has studied this complication in a large number of patients and divides the effusions into three classes:

- 1. The most common one, purely serous, remains small and is usually reabsorbed in a few days or months.
- 2. Begins as the first, but has a tendency to increase in amount, is stubborn, becomes cloudy and then purulent, contains tubercle bacilli and causes thickening of the pleura. These large exudates during their existence lead often to marked improvement in the patient. After the exudates are reabsorbed the favorable effect disappears. They may eventually result in a contraction of the pneumothorax, a draw-

ing in of the thorax and a reexpension of the diseased lung.

3. Mixed infection exudates, rare but more serious. They are due to infection during fillings, perforation of a cavity or acute general infection.

Exudates were present in 11 of my 20 cases. In 6 the effusion was only slight and of no importance. In the other five instances, this complication was a prominent factor in the course of the treatment.

My experience so far leads me to look upon the effusions in artificial pneumothorax as parallel with the serous effusions of ordinary tuberculous pleurisy, and if properly handled, of no great disadvantage to the treatment, in fact as shown in several of my cases marked improvement follows the development of the large exudates, probably from a serological effect as often occurs upon the advent of wet pleurisy in tuberculosis.

The treatment of pneumothorax exudates is practically the same as that of ordinary pleurisy. They should be let alone unless large enough to produce pressure symptoms. Care must be taken in aspirating the effusions, which swarm with tubercle bacilli, to avoid the escape of any fluid under the skin, and the formation of tuberculous abscesses. It is surprising how much even slight exudates affect the gas compression and prolong the intervals of refilling. This point has to be watched closely and the gas pressure regulated accordingly by withdrawing some fluid or nitrogen. As previously mentioned, in one case, no doubt failure to realize the importance of this, led to the death of the patient. The strong gas compression above an ef-

fusion cas be studied by means of the X-rays. As shown in the radiagraphs Nos. 1, 2, 3, and 4, the lung above the level of the fluid is extremely collapsed. Dry pleurisies are very common in pneumothorax, and this is not surprising when we consider the traumatism from the stretching and tearing of adhesions and the abnormal position in which the two surfaces of the pleura are placed. These pleurisies occurred in most of my cases and were the usual cause of temperature exacerbations during the course of treatment. While not as severe as the ordinary pleurisms I was impressed with their frequency.

As to the final results of pneumothorax treatment I have only one case in which treatment has been concluded (see radiograph 5). In this patient the compressed lung has reexpanded with no recurrence of activity, but a thickened pleura remains and the pleural surfaces will probably in the end be united by adhesions. Complete, enduring cures have been recorded and reliable observations have shown that the healthy parts of the lung are not functionally impaired by prolonged compression and return to normal after the pneumothorax passes off.

I may briefly state in conclusion that artificial pneumothorax occupies a well established position in the treatment of pulmonary tuberculosis of today. It gives a chance of betterment or healing in hopeless processes involving one whole lung which hitherto were considered incurable. In smaller lesions it should not be employed until other treatment has failed. We must always be guarded in predicting results, as neither by physical signs nor the X-rays can we absolutely determine the condi-

tion of the good lung. In spite of the most painstaking care, foci will occasionally be lighted up on the opposite side. Cardiac displacements and circulatory disturbances are among the worst drawbacks to this operative measure. Exudates are very common, but no cause for discredit. They are to be treated like the serous exudates of ordinary pleurisy, taking care to regulate the gas pressure. Improvement very often follows their appearance. Dry pleurisies are frequent, give rise to temperature exacerbations and thereby impair one of the best symptomatic results.

I have said nothing about the accidents associated with the injection of gas. If the ordinary rules are followed, which are simple enough and now generally understood, the operation in itself is a harmless procedure.

BIBLIOGRAPHY.

L. V. Muralt, Davos-Dorf. "Erfarhungen über Exsudate bei kunstlichen Pneumothorax." Beitrage zur Klinikder Tuberkulose, VII, Supplementeband.

Felix Klemperer, "Uber die Behanalung die Lungentuberkulose mittels Kunstlichen Pneumothoraxbildung." Berliner Klinische Wochenschrift, 1911, No. 51.

Faginoli "Uber den Therapeutischen Pneumothorax," Munchener Med. Wochenschrift, 1912, No. 19.

C. H. Johnson, "Artificial Pneumothorax in Pulmonary Tuberculosis," Journal of the Michigan State Medical Society, March, 1914.

DISCUSSION.

Discussion: Dr. Waite's Paper. (Published in December).

Dr. M. K. Wylder, Albuquerque.

Dr. Waite's paper has certainly given us all something that we should think about, and something that should put us more on our guard. It seems to me, if we were to boil his paper down to a few words, that the treatment of new growths is about the same as the proper way to educate a boy, which is to begin with his grandfather. The proper treatment for cancer is to operate on it before you get it.

I remember one of our old professors when I was a student (he was an old man at that time), whose favorite remark when he met any kind of a new growth was: "It does not belong there, take it out." That was the policy he followed, and the instructions he gave us in every case. The early operation of practically all tumors in nearly all cases is successful.

I remember a case that came under my observation about six years ago. A woman came to me with a small lump in the breast. I examined it and advised an operation; she also went to Dr. Cornish and he told her the same thing; to Dr. Wroth and he gave her the same advice. Fighting the idea of an operation, she fell into the hands of a man who found that the seventh cervical vertebra was pressing on the first corsal, and he was going to remove the cause and let the condition get well of itself.

I happened to know the family well. They left here and went to Douglas, Arizona. About a year ago I heard of her death from cancer of the breast. At the time I first examined her the lump was not any larger than a pigeon's egg; a case in which I would expect absolute recovery, if it had been treated in the way that either Wroth, Cornish or myself advised, but Osteopathy failed to cure it.

In the question of proper treatment of the new growth, I believe Dr. Waite's proposition of removing them at the earliest possible date is the best treatment. Unfortunately a great many of them are not seen. They do not attract the attention of the

patient, and when the patient is attracted often they do not consult a physician until they are far advanced. I have seen cases in which I was the first physician to be consulted, in which there were very advanced tumors on the first examination.

A great many methods of treatment are advanced. I remember in Chicago last fail of hearing Koernig and Gauss devote & whole afternoon to the use of mesothorium in the treatment of new growths, and the next evening was devoted to the use of radium for the same purpose. However, if the suggestions made by Dr. Waite are followed carefully we will not need mesothorium or radium, as their fields are largely in inoperable cases.

Abstracts

PROPAGANDA FOR REFORM.

Alborum. Alborum is sold by the Whitehouse Chemical Co., Lynchburg, Va., and is stated to contain boric acid, alum, phenorand oil of peppermint, the amounts not being declared. This preparation lacks originality and is unscrentific. Its exploitation being held contrary to the best interests of the public and the profession, Alborum was refused recognition by the Council on Pharmacy and Chemistry. (Jour. A. M. A., Dec. 1 2,1914, p. 2149).

Betul-ol. Betul-ol is a methyl salicylate preparation advertised by E. Fougera and Co., New York, to physicians and, indirectly to the public ,as an external analgesic and antirheumatic. It was refused recognition by the Council on Pharmacy and Chemistry pecause the statements regarding its composition are vague, misleading and incorrect, because unwarranted therapeutic claims are made for it, because the recommendations are likely to lead the public to the serteratment of rheumatism, with serious consequences. (Jour. A. M. A., Dec. 12, 1914, p. 2148).

Cystogen, Cystogen Aperient and Cystogen-Lithia. Cystogen is the therapeuticary suggestive name applied to hexametrylenamin by the Cystogen Chemical Company, St. Louis, Mo. By means of extravagant

claims, unwarranted assertions and pseudoscientific arguments the Cystogen Chemical Company advises the use of Cystogen Aperient or Cystogen-Lithia or all three in a well nigh endless number of disease. The promoters take good care that every Cystogen prescription is likely to spread the Cystogen gospel among the people. In announcing the rejection of these products the Council on Pharmacy and Chemistry calls attention to the conservative discussion of Hexamethylenamin which appears in its publication "Useful Drugs" (Jour. A. M. A., Dec. 12, 1914, p. 2149).

Cysto-Sedative. Cysto-Sedative (Strong, Cobb and Co., Cleveland, Ohio) is said to contain thujo occidentalis, pichi, saw palmetto berries, triticum repens and hyoscyamus, Cysto-Sedative was refused recognition by the Council on Pharmacy and Chemistry because unwarranted and preposterous claims were made in regard to its preparation and because unwarranted therapeutic claims were made for this unscientific mixture (Jour. A. M.A., Dec. 12, 1914, p. 2149).

Ergoapiol. Ergoapiol (Martin H. Smrth Co., New York) is a mixture put up in capsules, each of which is said to contain Apiol (Special M. H. S.) 5 gr., Ergotin 1 gr., Ou Savin ½ gr., Aloin ½ gr. Examination incorp. 2149).

gr. apiol but an oleoresin of parsley seed. The recommendations in the advertising matter invite its indiscriminate use. The Council on Pharmacy and Chemistry resused to recognize this unscientific mixture of ingredients which has widely differing therapeutic effects (Jour. A. M. A., Dec. 12, 1914, cated that each capsule did not contain 5

Apergols. Apergols, put out by M. K. Wampole Co., Inc., is apparently an inversion of the name Ergoapiol and the preparation appears to have essentially the same formula. In general the claims made for Apergols are the same as those for Ergoapiol. The County refused admission to Apergols because they are advertised indirectly to the public, because of unwarranted therapeutic claims, because of the non-cescriptive name and because the product is unscientific (Jour. A. M. A., Dec. 12, 1914, p. 2149).

Gastrogen Tablets. These tablets, recommended by the Bristol-Myers Co., New York, to be used in connection with its other nostrum, Sal Hepatica, are said to contain pepsin, calcium carbonate, calcium phosphate and "aromatics." As patients who need an antacid do not need pepsin and vece versa the preparation is unscientific and the therapeutic claims made for it unwarranted. Gastrogen tablets were rerused recognition by the Council on Pharmacy and Chemistry (Jour. A. M. A., Dec. 12, 1914, p. 2149).

Iodalia. Iodalia (Geo. J. Wallau, Inc.) is claimed to be a valuable substitute for iodides. Examination in the A. M. A. Chemical Laboratory indicated that when administered i twould act like ordinary ionides and that to obtain the equivalent of 20 gr. potassium iodide it would be necessary to give the contents of a one dollar bottle of Iodalia. Particularly representable among the many unwarranted claims made is one which suggests to the public that Iodalia will protect against infectious diseases. The Council voted that Iodalia be refused recognition (Jour. A. M. A., Dec. 12, 1914, p. 2145).

Iodotone. Eimer and Amend, who market Iodotone, state that it is a glycerin polition of hydrogen iodide, containing 1 gr. iodin to each fluid drachm. While Iodotone must act like ordinary iodides and white nearly one ounce of glycerin must be swallowed to obtain the equivalent of 10 gr. potassium iodide, the unwarranted claims are made that Iodotone is superior to iodices. Because of misleading claims and because the name Iodotone is likely to suggest its use as a general tonic, Iodotone was refused recognition by the Council on Pharmacy and Chemistry (Jour. A. M. A., Dec. *5, 1914, p. 2149).

Nourry Wine. This wine, sold by E. Fougera and Co., is said to contain 12 per cent. alcohol and 1½ gr. iodin to the fluid ounce in combination with tannin. Examination in the A. M. A. Chemical Laboratory snowed that its action would be that of ordinary iodid and that the non-production of iod:sm is due to the small amount of iodin it con-

tains. Claims are made which are prone to lead to its use both by the profession and the public in conditions in which effective medication is called for. The Council on Pharmacy and Chemistry refused recognition to Nourry Wine. (Jour. A. M. A., Dec. 12, 1914, p. 2150).

Warner's Safe Remedy. "Warner's Safe Remedy for the Kidneys and Liver and Bright's Disease" is reported by the A. M. A. Chemical Laboratory to contain alconol, by volume, 14.40 per cent., glycerin, by weight, 7.72 per cent, potassium nitrate 1.75 per cent. and vegetable extractives. .ais preparation consists essentially of asconol and potassium nitrate. Alcohol is contraindicated in inflammatory diseases or the kidneys and potassium nitrate is a kidney Sufferers from kidney diseases irritant. who take Warner's Safe Remedy will shorten their lives. (Jour. A. M. A., Dec. 19, 1914, p. 2246).

Cypridol Capsules. Cypridol capsuses, sold by E. Fougera and Co., New York, are stated to contain mercuric iodide dissolved in oil. The Council on Pharmacy and Chemistry refused recognition to Cypridol capsules because they were sold under unwarranted therapeutic claims and because tney were marketed in a way to appeal to the public. If the capsules are once prescribed the directions on the bottle and the rull instructions for the treatment of syphilis which accompanies the bottle is likely to lead tne patient to attempt to treat his malady on his own accord and thus probably forfer his chances of a cure. Physicians who want to use a solution of mercuric iodide in on, should have their pharmacist prepare it for them. (Jour. A. M. A., Dec. 19, 1914, p. 2247).

Intestinal Antiseptic W-A. The Abbott Alkaloid Co., advertises Intestinal Antiseptic W-A. as "A scientifically blended and physiologically adjusted mixture, of the pure sulphocarbolates of calcium, sodium and zinc, grs. 5, with bismuth subsalicylate, gr. 1-4 and aromatics." The Council on Pharmacy and Chemistry refused recognition to this proprietary because the formula does not indicate the proportionate amounts of the several sulphocarbolates, because the

name is therapeutically suggestive and an invitation for the use of the preparation by the public and because exaggerated therapeutic claims are mare for it. The claims which are made are most extreme; they contrast sharply with the low esteem in which the phenolsulphonates (sulphocarbolates) are generally held. It does not appear that the claims have been substantiated by proper evidences. (Jour. A. M.A., Dec. 29, 1914, p. 2247).

Keller's Tuberculin Test Plate. This appears to be an attempt to exploit the Moro tuberculin ointment. The test does not discriminate between active and latent tuperculosis. As most adult persons have experienced tubercular infection at some time in life, a large majority of persons will respond positively to the test. (Jour. A. M. A. Dec. 19, 1914, p. 2250).

NEW AND NON-OFFICIAL REMEDIES.

Since publication of New and Non-official Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies."

Pasteur Antirabic Vaccine. The virus is prepared according to the method of the Hygienic Laboratory, Washington, D. C. A dose is sent by mail each day. Twentyone to twenty-five doses constitute a treatment. Laboratory of W. T. McDougall, Kansas City, Kansas.

Solution Pituitary Extract. A solution of a purified extract of the posterior lope of the pituitary gland of the ox. It is assayed so that 1 c. c. represents 0.2 Gm. Iresu gland. It is used by hypodermic or intrassuuscular injection mainly to stimulate the uterus contraction in labor. It is supplied in the form of Ampules containing 1 c. s. Solution Pituitary Extract. The H. K. Mulford Co., Piladelphhia, Pa. (Jour. A. M. A., Dec. 5, 1914, p. 2043).

Radium Bromide. The market supply is

a mixture of radium bromide and barrum bromide and is sold on the basis of its radium content. It is sold for use in appucators, inhalatoriums and injection solutions. Radium bromide is marketed as:

Radium Bromide, Radium Company of America. All deliveries are made subject to the test of the U. S. Bureau of Standards or any reputable expert designated by the purchaser. The Radium Company of America, Sellersville, Pa.

Radium Bromide, Standard Chemical Co. Sold by the Radium Chemical Co., Pittsburg, Pa. (Jour. A. M. A., Dec. 26, 1914, p. 2289).

Radium Carbonate. The market supply is usually a mixture of radium carbonate and barium carbonate and is sold on the basis of its radium content. It is sold for use in applicators. Radium carbonate is marked as:

Radium Carbonate, Standard Chemical Co. Sold by the Radium Chemical Co., Pittsburg, Pa. (Jour. A. M. A., Dec. 26, 1914, p. 2289).

Arbutin, Merck. This brand of Arbutin has been accepted for inclusion with New and Non-official Remedies. Merck and Co., New York.

Radium Chloride, Radium Co., of America. This form of radium chloride has been accepted for inclusion with New and Non-official Remedies. Radium Co. of America, Sellersville, Pa.

Radium Sulphate, Radium Co. of America. This form of radium sulphate has been accepted for inclusion with New and Non-official Remedies. Radium Co. of America, Sellersville, Pa. (Jour. A. M. A., Dec. 26, 1914, p. 2290).

Cupric Applicators (Copper Sulphate 20-25 per cent.) Wooden sticks, 6½ inches long tipped with a mixture of copper sulphate, alum and potassium nitrate, containing 20 to 25 per cent. copper sulphate. Antiseptic Supply Co., New York. (Jour. A. M. A., Dec. 26, 1914, p. 2290).

NEW MEXICO MEDICAL JOURNAL.

SOUTHERN SIERRAS SANATORIUM

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L. M. Ryan, M. D., Medical Director. Chas. Dreyer, Superintendent.

HYPODERMIC MEDICATION.

Perhaps no procedure in medical practice is more common or more essential than that of hypodermic injection. How important, then, that the tablet employed for the purpose be in all respects as nearly perfect as possible—for, be it remembered, hypodermic tablets are emergency agents. When the physician resorts to this form of medication he wants results, and he wants them promptly. It behooves him, therefore, to choose his hypodermic tablets wisely, with due regard to the maker's reputation for producing tablets that are correct as to purity, activity, solubility, identity and uniformity.

Probably no manufacturers are more scrupulously particular with respect to all these essentials than are Parke, Davis & Co., whose long identification with the production of hypodermic tablets and whose equipment ofr this branch of manufacturing pharmacy are positive assurances of trustworthy products. Parke, Davis & Co. lay particular emphasis upon the free solubility

of their hypodermic tablets. And this is a quality that should not be lightly considered. There is a wide difference between solution and disintegration. Some tablets fly to pieces quickly enough when shaken in water. but the particles do not dissolve quickly. Such tablets cannot be depended upon to produce the desired therapeutic results. The materials entering into Parke, Davis & Co.'s hypodermic tablets are exhaustively tested for purity. They are checked, crosschecked, tested and retested for identity. Seemingly every care is exercised that the ultimate product shall be as nearly perfect as human skill can make it.

That social diversions provide an important adjunct to health building is well recognized. An institution which takes full advantage of this idea is the Battle Creek Sanitarium which employs a corps of social secretaries whose duty is to provide such pleasant diversions as will lead patients to forget, as far as possible, the ailments from which they seek relief.

Of course such diversions must be very simple in form; varying types of invands must be cared for separately and the whole subject of social diversions must be given very-careful study in order to effect resirable results.

For the invalid who is unable to leave ner room, and the patient who is about to undergo a surgical operation, a social secretary known as the "Official Sunshine" is provided. Her duty is to extend encouragement to the suffering.

For the more improved patient, simple social gatherings such as lectures, musicates and receptions can be arranged.

The Sanitarium has found that this branch of the work is very effective in making patients feel perfectly at home in their new surroundings and in leading them out of themselves into the paths of health.

The New Mexico Medical Journal

Volume XIII FEBRUARY, 1915 No. 5

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The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

PHYSICIANS SHOULD NOT FAIL TO ACQUAINT THEM-SELVES WITH THE PROVISIONS OF THE HARRISON ANTI-NARCOTIC LAW WHICH BECOMES EFFECTIVE MARCH 1st, REGISTER WITH YOUR NEAREST INTERNAL REVENUE

COLLECTOR.

"TWILIGHT SLEEP" IN THE LIGHT OF DAY.

Some very excellent lay magazines and some equally good professional ones have been taking somewhat opposite sides in a discussion of "painless childbirth" according to rules laid down by Drs. Kroenig and Gauss, physicians-in-charge of the maternity clinic, Baden University, Freiburg, Germany.

The treatment is practically an adaptation to obstetrics of Crile's anoci association, that is, it is partly psychologic and partly the administration of drugs to the point of semi-narcosis with the aim of eliminating the memory of pain.

Absolute quiet and very soft light in the lying-in chamber is insisted upon. One hypodermic injection of narkophen, which is claimed to be less toxic than morphin, is given, and an hour later a first injection of scopolamin into the muscles of the lumbar region. Small doses of scopolamin are repeated at intervals, according to the length of the labor, usually about five doses being given. Advocates of the method claim remarkable results. A few institutions which are properly equipped for the work in the United States have given it sufficient trial to demonstrate that "twilight sleep" does act to abolish

memory of pain and may be practiced without marked danger to mother or child, but only with every institutional precaution. Gentlemen who have tried out the German technic do not recommend it as a safe procedure under the usual conditions of a general obstetric practice. Except for the abolition of the memory of pain, and as a luxury to women in confinement, there is, thus far, no sustained claim that the method presents any tangible advantages in the average case of obstetrics.

On the other hand, opponents are severe in their condemnation, claiming danger of the child being asphyxiated, prolongation of labor, and excessive hemorrhage. But perhaps the question of medical ethics involved as regards the kind of publicity employed in exploiting the method had some bearing upon opinion rather sharply expressed.

Despite the fact that medical journals generally were quick to denounce the methods of Kroenig and Gauss, the same journals were equally prompt in commending the made-in-America "twilight sleep," as recommended to be placed in the hands of every doctor who cares to purchase tablets of morphin and hyoscin.

Now, despite many unfavorable reports upon morphin and hyoscin in labor—the journals were full of it a few years ago—there are many physicians using these drugs and clairing good results. They must have a reason for it, just as others have a reason against it. But merely giving morphin and hyoscin is not practicing the "twilight sleep" method; no, not even approximating it!

The fact is that racial differences should modify our obstetric practice, as women of different races present differing problems. No hard and fast rules can be laid down. Some women neurotic tendencies—pampered, petted, unaccustomed to the hardnesses of life-will welcome the German technic of "twilight sleep." One can readily understand that the method has a legitimate application among a certain class. Also these women should be confined in a special institution, where they can safely have the balm of "twilight sleep." And one can understand readily enough that the hard-headed country physician sometimes has cases in which morphin and hyoscin will serve him and his patient. True, if he uses these potent drugs, he should remain a longer time with the patientcharging for his time so as to be on the safe side, and he should not overdo the dosage. But he should not bluff. Giving a dose or two of morphin and hyoscin is not "twilight sleep," any more than the common but unscientific custom of giving a hypodermic dose of morphin before anesthesia is "anoci association."

And the blunt fact remains that neither "twilight sleep" nor the administration of morphin and hyoscin in labor is good practice as a routine procedure. Most women need neither one of them. The obstetrical authorities who are opposing these methods are not doing so from mere crankiness.

SURGERY AND ANESTHESIA.

There is a popular demand upon the doctor to "stop this pain!" After all, most of the doses of narcotics we give are given, not because we think the patient needs the narcotic, but because he will promptly go to another doctor if we refuse. This editor may preen himself upon his virtue because he pointblank refuses a narcotic nine times out of ten it is asked for, and loses practice by the many refusals; but the Scotch are good refusers, and it may be bluntness more than virtue. whatever it is, it saves many a man and woman from themselves. And that is part of a doctor's job.

The surgeons are responsible for much of this craze for pain-stopping. Incising a boil for a dollar has given way to the ten-dollar, local-anesthesia surgical operation. "Painless dentists" have the call. Blisters are out of date, principally because they hurt. The man who invents "painless vaccination" will have the anti-vaccinationists on the run in short order. Women who have hair removed from their faces by the electric-needle method are now demanding that cocaine first be applied. It is the pain and annoyance that keeps many women from nursing their babies. Ear rings have gone out prinpically because it hurts to pierce the ears. Men are not a bit better. Every headache must be "stopped" by a dose of poison and we must soothe our nerves with several cigars a day. Fie on us! We are becoming soft. modern surgery is helping along in the craze for "stopping" pain.

So, is it to be wondered at that women are asking why it is that normal labor is being made a matter of elaborate surgical technic and without any form of anesthesia, whereas in other surgical work she is fully anesthetized? Years ago, before a labor was regarded as a surgical crisis, ether was given, and we are being asked why its use was nearly abandoned in the laying-in room.

But physicians know the danger of semi-anesthesia Maybe we have exaggerated these dangers. Certainly we have devised no way to overcome them. And yet it would seem that, in the supreme crisis of a woman's life, there should be a way. Let us try to find it. "Twilight sleep" may be a beginning. So, in stead of denouncing it, let us try to find out its weakness. Personally disappointed in all methods of anesthesia of semi-anesthesia we have employed a labor, and not at all inclined to view hyoscin favorably, yet we feel that a way should be found, even if it is simply some modification of or improvement upon present methods. Meanwhile, let us be charitable to the physicians who advocate "twilight sleep" and hyoscin. If we discover some better way, then our condemnation will come with better grace.

PAIN AND EUGENICS.

But a few general considerations must not be forgotten. If we are to retain our regard for the well-being of the race at large, we will not allow ourselves to be swept off our feet by the ultra-modern fear of pain and the craze for narcotics. Sex consideration is admirable in its way; but child-bearing is not a matter of ordinary sex consideration, because the race, not merely

the female sex, is most vitally involved in it.

Of course, it is a trial for women to face child-bearing and its pains. Every proper effort should be made to mitigate these trials. But if eugenics means anything vital to the modern woman, she will not act the coward and menace the safe conduct of the important function of childbearing. She will seek for a remedy, but she will also face the issue whether a remedy is found or not.

With the war craze sweeping the earth and the consequent destruction of the best manhood of several races, we should encourage a sex patriotism in women. Historically women have shown themselves eminently capable of such a patriotism, and the women of Europe are signally manifesting it now.

And as regards the men: is it not time that we suppressed the narcotism of alcohol and tobacco in excess? Why does our civilization cry out for these harmful things? As regards the unavoidable pains and discomforts of life, medicine and surgery will be but poorly employed if it devotes too much of its energies to softening moral fiber, inducing fear of ordinary pain, taking moral heroism from the people, destroying stoicism and engendering the feeling that our primary animal functions are something the race have outgrown and their normal pains something that must be "stopped" with drugs.-Medical Council, January, '15.

MYTHOLOGICAL CANCER

There has been considerable discussion recently of the old question of "cancer houses" and "cancer streets." Statements by eminent investigators, which have been given wide currency,

have tended to strengthen the impression that there are houses and streets where the disease occurs with unusual frequency, the implication being that a relation of some kind exists and that cancer is in some way an infectious disease. This view and the alleged evidence to support it were vigorously attacked by Dr. E. F. Bashford, the general director of the work of the Imperial Cancer Research Fund, in his report to the annual meeting of the Fund, held in London in July. According to Dr. Bashford, cancer houses, in the sense that people living in them become infected, are as much of a myth as "cancer cages" in the case of animals, and he hopes that these fancied dangers "will cease alike to alarm the public and divert the energies of investigators from fruitful lines of inquiry." Acording to Dr. Bashford the public is misled by statements based on simple enumeration of houses in which one. two, or three, or more cases of cancer had occurred. Such an inquiry can be only preliminary to an accurate determination of whether cancer is really more frequent in one house than in another. To reach the true conclusion it would be necessary to consider all the details of the population, not only of the "cancer houses" but also of the other houses in the same neighborhood as to age, sex, nature and site of the disease, duration of stay, occupation and habits. Some houses might be sought after by old people because of low rental or a house might be let to couples without children or it might be frequented by aged lodgers. Even if it were scientifically established that cancer is more frequent in certain houses, it would be fallacious to jump to the conclusion that cancer is infec-

In all such inquiries we must not overlook the great frequency of the disease, especially in adult life, and the part which ordinary chance would play in counting up cases in certain houses and certain localities. As Dr. Bashford points out, the British statistics for 1911 show that out of a total of 145,703 deaths of males over 35 year of age, 14,963 died of cancer, and out of 145,270 deaths of females over 35 years of age, 19,583 died of cancer. It is easy to calculate therefrom that the chance that a man over 35 will die from cancer is one in 9.7, and for a woman over 35, one in 7.4. It would indeed be strange if this large number of deaths from cancer were distributed evenly and it is perfectly natural to suppose that some houses and some families would exhibit many more cases, and might even by the laws of chance continue to exhibit a high rate over long periods of time. The conclusion that cancer is either infectious or hereditary would, on such evidence. be unwarranted. Sir Thomas Oliver in a recent address referred to one street in which between 1893 and 1908. nineteen persons and one dog had died of cancer. Careful examination shows that the death rate of this street was only a little above the average for the whole country.

THE NEW YORK TRIBUNE'S CAMPAIGN.

These be parlous times for the medical faker. The new York *Tribune* recently entered the lists against the quack and the fraudulent "patent medicine" with an educational campaign that promises to have far-reaching effects. The motto of the *Tribune* is: "First to Last the Truth: News, Ed-

itorials, Advertisements." Naturally, living up to such a motto bars practically all medical advertising. But the Tribune has gone further. A few weeks ago it announced that it would guarantee its readers against loss or dissatisfaction through the purchase of any wares advertised in its columns. Such a step on the part of a daily newspaper is, we believe, unique. A few high-class magazines give their readers this protection, but, so far as we know, no newspaper has ever assumed such a task as that undertaken by the New York paper. As the Tribune says:

"Out of our armory of defences goes the comfortable old doctrine of ceveat emptor, that favorite refuge of the newspaper whose hands are full of not over clean advertising revenue. Caveat emptor is the strict letter of the law, but we shall never retreat behind it. In practice it means that the reader takes care while the newspaper takes the money. Under our system he does not have to take care. We will do the taking care for him."

Should newspapers over the country, generally, take this stand, it would sound the death knell of the fraudulent "patent medicine" industry. Imagine, if possible, a newspaper guaranteeing its readers against loss from taking "Pulmonol" or "Eckman's Alterative" for consumption, from taking "Swamp Root" or "Doan's Kidney Pills" for Bright's disease, from taking "Wine of Cardui" or "Lydia Pinkham's" for "female trouble," from taking Coutant's alleged cure for deafness, from using Plapao Pads for rupture, from taking any of the thousand and one wickedly exploited cures for cancerimagine a newspaper that guaranteed

its readers against "loss or dissatisfaction" carrying such advertisements! It isn't conceivable that any paper that had the interest of its readers sufficiently at heart to take the stand the Tribune has could, in the nature of the case, accept advertisements from fraudulent "patent medicine" concerns and quacks. Yet, as a moral principle, the new standard set by the New York Tribune, while so far in advance of the procession, is merely one of simple, elemental honesty. It is the stand that is taken by every honest man in business. The rapid change that is now taking place in the advertising world makes one optimistic. We believe that, before the present decade has passed, the position taken by the Tribune will be accepted as a matter of course by the majority of decent newspapers throughout the country. In the meantime. every right-minded citizen should throw the power of his influence behind those publications that are waging war against frauds and leading in the fight against those powers of evil that menace both public health and public morals. More power to the pen of the New York Tribune, says The Journal of the American Medical Association.

Original Articles

ORCHITIS AND EPIDIDYMITIS

F. F. FADLEY, M. D. Albuquerque, N. M.

(Read before the Bernalillo County Medical Society.)

The inflammatory diseases of the testes are classified according to their anatomical seat, as, epididymitis when

the epididymis alone is involved, usually gonococcal in origin; orchitis when the testis is alone involved, this condition is comparatively rare, except as a complication of infectious diseases; and epididmo-orchitis, when both the epididymis and testis are involved, due to trauma, to infectious diseases, or as a complication of urethritis, which is the most frequent cause.

All forms of diseases of the testes and epididymis are considered chronic, except those due to gonococcal urethritis, trauma and acute infectious diseases. Under chronic diseases are included tuberculosis, lues, cysts and tumors. It is estimated in the genitourinary clinics of the large cities that ninety-five per cent of the esticular diseases in adults do not occur in the testis proper, but in the epididymis of which gonococcal epididymitis furnishes eighty-five per cent, tubercular epididymitis ten per cent, and all other diseases five per cent.

Injuries are much less the cause of orchitis than epididymitis, but the results are apt to be more disastrous, as often there is a total destruction of the gland through pressure of the inflammatory infiltration upon and consequent degeneration of the seminal tubules, or through abscess and gangrene.

Traumatism inflicted during operations on the urinary and genital organs as in catheterizations, dilation of the strictures, evacuation of the hydrocele, and especially lithotomy in the aged or enfeebled, are frequent causes of acute orchitis. Abdominal strain as occurs in extreme constipation, heavy lifting, prolonged and repeated sexual excitement, especially without gratification, is a predisposing factor.

The acute infections are responsible for the haematogenous or metastatic forms of orchitis and epididymitis, owing to the very favorable conditions in the secretory membranes for the arrest there of the infectious elements circulating in the blood. Inflammations of this character are seen at times in parotitis, scarlatina, varioloid, pyaemia, malaria, leprosy, acute rheumatism, gout, typhoid fever, influenza and tonsillitis. When an orchitis or epididymo-orchitis complicates any of these diseases, the inflammation usually begins in the testis, and may spread to the epididymis, although this group of cases has the tendency to limit itself to the testis, the same as the epididymitis of gonococcal origin has to limit itself to the epididymis. In these cases, the attack comes on suddenly with the decline of the disease or during convalescence. It usually ends in resolution, although atrophy is not uncommon, and in cases of typhoid and smallpox suppuration is not infrequent.

In mumps the testicular complication is usually a true orchitis, but an epididymo-orchitis may be present from the first. It usually sets in when the glandular swelling begins to subside, about the end of the first week. This happens most frequently in young individuals, from puberty on to the age of thirty, though it may occur in still younger patients, and cases are reported in much older persons. onset is rapid, the testis enlarging to about twice its normal size, and becoming tender and very painful. The affection reaches its height on or about the fourth day, after which it subsides quickly. In case of bilateral involvement, both glands are not implicated at the same time, as the inflammation in

the first subsides before the second one is involved. The disease generally ends in resolution, although atrophy of the tissues occasionally takes place.

In reference to the disease relationship between the salivary glands and the testis none exists, but the salivary glands and the testes are different localized manifestations of the same condition and the glands most susceptible to its influences. In some epidemics in the French army it has been noted that the orchitis in many cases occurred even before, or even without the parotid gland being affected.

In typhoid fever, when the testicle is affected it is most probably due to a phlebitis of the spermatic veins. It occurs with about equal frequency in the epididymis and testicle and comes on suddenly during convalescence, running a course of about ten days. It is not severe unless it ends in suppuration, which takes place in about twenty per cent of the cases.

In smallpox the inflammation is usually mild, except in case of suppurtion, which happens quite frequently.

In scarlet fever the epididymis is most frequently affected.

In gout and in acute rheumatism the inflammation of the testis begins just before or after an attack in some other region.

In malaria, the testis and epididimis are enlarged en masse; the scrotum is edematous; its veins are prominent, and fluid is present in the tunica vaginalis. The whole mass is enlarged to three or four times its natural size and is hard and resisting. The acute period lasts three or four days if quinine is given, and resolution takes place gradually in three or four weeks, the gland

usually undergoes atrophy or some induration remains in the head of the epididymis.

Gonococcal epididymitis is secondary to urethritis, in fact, acute and chronic gonorrhoea is the most common cause of epididymitis. The inflammation extends from the posterior urethera, through the mouth of the ejaculatory ducts, thence along the vas deferens to the epididymis. The globus minor is the first part of the epididymis attacked and becomes increased in size. The body of the epididymis then becomes thickened as does the globus major. The ducts of the epididymis become swollen and infiltrated and contain pus. mucus and desquamated epithelia. In both epididymitis and epididymo-orchitis there is a slight effusion into the tunica vaginalis; the scrotum is also infiltrated and thickened to a varying degree in most cases. This condition usually occurs during the second or third week, but may come on later in an attack of acute gonorrhea. It is generally unilateral, although the second testis may also become involved. In this case, the second organ becomes affected either immediately after the inflammation in the first one has subsided, or from one to four weeks later. The exciting causes of this complication are too strong or energetic local treatment of the posterior urethera, instrumentation in the acute stage; the neglect of treatment; hand injections given or taken too forcibly; irritation due to sexual excitement; alcoholism; over-exercise, especially dancing, riding and bicycling; exposure to wet and cold, and badly fitting trousers that compress and irritate the testicles.

The testicle once attacked by gono-coccal epididymo-orchitis, is distinctly

more prone to recurrence. There is a predisposition to the same complication and operations involving the posterior urethera in those who have once been a victim of testicular inflammation are usually followed by post-operative complications of the same condition.

Tuberculous epididyo-orchitis is probably the most frequent disease of this organ with the exception of the gonococcal variety. Tuberculosis is far more common in the epididymis than in the testicle, and clinically in a great many cases it is hard to tell whether or not the testicle is involved. Tuberculosis of the testis and epididymis may be primary so far as the genito-urinary tract is concerned by metastasis through the blood and lymph channels from the pulmonary or gastro-intestinal regions, or the disease may begin as a renal tuberculosis and descend through the ureters, bladder, prostate, seminal visicles and deferens to the epididymis and testicle Tuberculosis of the epididymis and testicle is most commonly met in individuals in the prime of life, its occurrence in extreme youth and old age is very rare. The process usually begins as one or two nodules in the head of the epididymis. The nodules have a peculiar feel. They are not usually round, but are irregularly flattened and angular in outline like faceted calculi imbedded in the tissue, are hard and at times feel like a piece of wood. As the disease progresses, the number of nodules increases until in an advanced case. the whole epididymis is one mass of tubercular or fibrous tissue. The stage of softening usually sets in a few months after the appearance of the

nodules, and, as the abscess develops, the scrotum over it becomes red and adherent. The abscess breaks spontoneously if not incised and the cavity heals, or the destructive process may extend forming chronic suppurating sinuses or fistulae. The openings vary in size, sets and number and are most frequently found in the lower and back part of the scrotum.

A tubercular orchitis often shows neither nodules nor tubercles in the first stage of the disease, but a gradual enlargement of the testicle, later nodules appear, which create and form cavities that may rupture through the scrotum.

In the acute form the epididymis becomes quickly enlarged and there is considerable pain and feeling of weight in the testicle.

In chronic form there may be no subjective symptoms, the patients attention being first called to the condition by accidentally noticing an enlargement of the epididymis. There is frequently, however, a period of sexual irritibility preceding or accompanying the development of this condition, such as frequent erections with seminal emissions.

Syphilis generally attacks the testicle proper and in the tertiary stage of the disease. The epididymis according to some writers, is never affected, except by a peculiar type of induration during the early secondary stage.

Luetic orchitis is not a common condition. It is due to metastasis. Age is to a certain extent a factor. Hereditary lues is a very prominent cause, giving rise to one-third of the cases. In cases of acquired syphilis the testes are seldom involved until after the age of thirty, but as the syphilis may not

develop until twenty or thirty years after the first appearance of the initial lesion, the orchitis may develop in persons of advanced age. The average time of development of syphilitic orchitis after the primary infection is three and a half years, but it may appear at any time from three months to thirty years.

Syphilitic orchitis is classified upon pathological rather than clinical observations, into two varieties, the diffuse or sarcocele, and the gummatous or cirsumscribed.

The diffuse form is characterized by the formation of dense interstitial connective tissue, resulting at first in the enlargement and induration of the testicle, but finally the sclerotic tissue undergoes a strong contraction, producing anaemia and atrophy ending in complete destruction of the organ. The organ is symmetrically enlarged and indurated, heavy and hard, the hardness is of a woody character, and the natural sensitiveness is decreased. Hydocele may be present, but not so frequent a complication as in the gummatous form, and the outline of the epididymis may be lost and become a portion of the symmetrical enlargement of the organ.

The gummatous or "circumscribed" is characterized by superficial nodules, which are distinctly felt, giving the organ an irregular contour. The organ is generally smaller and the condition is later in its development than the diffuse form. The nodules vary in size from a pin head to a walnut and occur with the greatest frequency on the anterior aspect of the organ. Hydrocele is frequent in this form and accounts for a part of the swelling in such cases. The condition comes on slowly and in-

sidiously, without pain. The patient does not notice it until some incident calls his attention to the organ. The trouble is sometimes bilateral, but both testes are seldom affected at the same time. In favorable cases when treatment is begun early and carried out systematically, the disease undergoes resolution, if untreated, it runs a very chronic course, lasting for years and ends in complete atrophy of the testicle, or the gummatous tissue may break down, forming abscesses which discharge through the scrotum.

THE ERADICATION OF TUBER-CULOSIS AND THE MEANS BY WHICH IT MAY BE ACCOMPLISHED.

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(Read before the First Annual Meeting of the Medical and Surgical Association of the Southwest, El Paso, Texas, December 10, 11, 12, 1914.)

If the average physician were asked to state briefly how tuberculosis might be eradicated, the answer would probably be, In one of five ways:

1st. By finding a sovereign remedy, a "cure."

2nd. By producing active specific immunity, by vaccination.

3rd. By the development of a racial tolerance.

4th. By preventing infection through destruction of all tubercle bacilli.

5th. By increasing individual resistance through hygienic living.

We are all physicians. We know that there is no sovereign remedy or cure, as the term is commonly used. Most very early cases recover under the dietetic hygienic regimen and most advanced cases fail in spite of remedies. No substance has been found by which it has been satisfactorily demonstrated that the life of a tuberculous guinea pig or other susceptible animal can be saved, and in treating tuberculosis of the skin or mucous membrane. no remedy can be applied which is specific. Concerning preventive vaccination, we cannot refrain from a passing tribute to the brilliant scientific work which has been devoted to this subject, but, to brutally summarize many years of patient investigation, it must be said that at the present time no practical method of preventing this disease by vaccination, either in man or in animals, has been successfully demonstrated.

The development of racial tolerance is the hope of the defeated, the expectation that if worse comes to worst a degree of immunity will eventually be acquired through the rather hard method of becoming inured to infection. In the tuberculization of the whole human race, say the exponents of this doctrine, will be found our salvation. Drink infected milk, therefore, say they; thank God daily that your child shows a positive cutaneous test, and rejoice in thine tuberculous ancestry. Behold the Jew, oldest of civilized races, and contrast his low mortality from tuberculosis with that of the negro, the Indian and other more primitive men. There is no doubt that there is a deep seated truth in this theory but it is of purely academic interest. Nearly two thousand years of exposure to tuberculosis have not resulted in the development of sufficient racial immunity to simplify in any degree the problem of eradicating this disease among the older civilized races.

Prevention of infection is the ideal and doubtless the ultimate goal and is receiving the deserved support of the profession and the laity but it is found to present great practical difficulties. We have learned the amazing truth that infection is practically universal in adults. We know that even the careful consumptive is passing in his urine and feces thousands of tubercle bacilli, and it seems probable that many so called closed cases do this. We have found that the tubercle bacillus while easily killed by heat, light and disinfectants, will live for more than a year in water and over one hundred days in the soil, and is very resistant to putrefactive action. There are some who tell of a saphrophytic form of a non acid fast tubercle bacillus and believe that lige the colon bacillus, the tubercle bacillus is ubiquitous. We do not believe that the difficulties of eliminating the tubercle bacillus are as great as extremists claim but it must be admitted that the problem is extremely complex. We know that the matter of dosage is important; that occasional exposure to infection may be experienced with impunity where gross infection may be fatal, and yet within a few months it has been shown that less than ten tubercle bacilli may cause infection in a child. (1) Just now the world is striving to reduce gross infection by isolation of the terminal cases. Single minded workers are bravely ignoring lesser sources of infection to provide institutional or other care for the advanced consumptive. With this we are all most heartily in accord. Prevent gross infection and we will take chances if we must on casual exposure, and yet we are confronted with the great practical difficulty that only a small part of the advanced consumptives in this country can yet find needed institutional care. The tremendous, the appalling cost of such a measure has delayed well laid plans and there is hesitancy due perhaps to a suspicion that something else is also necessary. In no part of the world as yet have the means been found to adequately prevent even gross infection. It is the thing to do but can we do it, or rather are we willing to pay the price? Not yet certainly. The world believes that something more is necessary to eliminate tuberculosis than isolation of the advanced cases. And the world is right.

The cultivation of individual immunity through hygienic living is worthy of our support. It is a sociological, not a medical problem. The sanitation of places of employment, the improvement of housing conditions among the poor, the elimination of unsanitary occupations, the prevention of child labor and of intemperance, the establishment of a maximum day and perhaps a minimum wage, industrial insurance and pure food laws, all these and many more will be helpful in the eradication of tuberculosis. Powerful forces of society have been loosed to accomplish these things and are receiving the support which the medical profession always accords to such measures. These great reforms should and undoubtedly will come but at the present time there is another and more urgent matter, purely medical in its aspects, which will presently be urged.

To summarize the present status of the five ordinary ways in which tuberculosis might be eradicated: (1) We have no cure for the cases commonly seeking treatment; (2) We cannot vaccinate; (3) Racial immunity is a forlorn hope; (4) Prevention must be constantly striven for but at present, with the yearly advent of thousands of far advanced cases, is not wholly practicable; (5) Individual immunity should be developed through hygienic living and will be a great factor in the campaign but it does not afford the immediate prospect of relief which is so urgently needed. How then shall we be saved? By utilizing all that is practicable in the schemes just discussed, by avoiding gross infection, by hygienic living, by treatment of the pretuberculous, and, to make these three possible, by universal early diag-

Universal early diagnosis is entirely practicable. It presents no inherent difficulties. There is also nothing new in the suggestion, not even the knowledge that without it all other measures to eradicate tuberculosis, excellent and desirable as they are, will be doomed to failure. The present campaign against tuberculosis is not the aggressive action of an organized army. It is the passive and feeble resistance of an unorganized mob with provision only for its wounded. At present we confidently expect the yearly advent of 150,000 new individuals, advanced cases of tuberculosis.

If we accept modern views there is scarcely a healthy individual who has not already made at least one successful arrestment of early tuberculosis in his own person. Usually these arrestments are made unaided and undiagnosed. A little extra rest, a little let down from the stress of life will often do it. If diagnosed early enough arrestment is comparatively simple. How early? Well, from one year to ten years earlier than it is now commonly found. Now does any of you doubt that an expert diagnostician could take any unit of society and if opportunity were afforded forestall the further development of advanced tuberculosis in that unit? This is not conditioned on the segregation of all the advanced cases originally present, although this is greatly 'to be desired. It is conditioned, of course, on the supposition that when he diagnosed incipient disease, or better the pretuberculous stage, necessary remedial measures would be immediately instituted. Let us make adequate provision for universal early diagnosis, early-enough diagnosis, and tuberculosis as we know it now would be under control in a single generation. It would vanish as an important cause of death with the passing of that pallid multitude which now knocks for admission at our sanatorium doors.

How shall universal early diagnosis be accomplished? In the first place there is no rapid method of diagnosis. No way is known by which clinical tuberculosis may be quickly differentiated from non-clinical, by which that requiring treatment may be known from that which does not. It was at first thought that in the tuberculin tests we had such a method. It would be of

this would enable us to examine large numbers of people in a short time. The Von Pirquet test can be applied by a single operator to several hundred persons daily. But unfortunately there is no tuberculin test which can be relied upon to differentiate latent from active tuberculosis. Neither the conjunctival. cutaneous, percutaneous, or subcutaneous test will do this, although it may be remarked in passing that the cutaneous test is so delicate as to be of value when found negative and the conjunctival test is not so delicate but that it has some value when found positive. But tuberculin is nothing more than a slight aid to the diagnostician except in detecting disease in the very young. The X-ray is only corroborative in early disease and occasionally helpful in differential diagnosis. The sputum examination should always be made, not once but many times; it is sometimes positive before physical signs appear, but is usually a late phenomenon. No biological method has so far proved reliable in diagnosis. A knowledge of the cellular content of the blood is of but minor assistance and the laborious search of blood, urine and feces for tubercle bacilli is not of great profit and is often misleading. To insure early diagnosis there is nothing, absolutely nothing that will take the place of a careful history and a thorough physical examination. Moreover, as you of course well know, a chest negative today may six months later show diease although a chest examined every six months by a competent man could hardly develop disease beyond early incipiency without detection.

incalculable value if we had, because

To accomplish early diagnosis then we must have frequent periodical ex-

aminations by competent men. Is there any inherent difficulty about that? We have compulsory education, we impose a poll tax upon the voter, and an income tax upon the well-to-do. We publicly demand certificates of health upon occasions, we vacccinate various against smalpox, and we take the census, noting with arbitrary precision the age and social condition of each inhabi-When necessary to protect the state we draft for army or navv, to further the cause of justice we impanel on a jury or subpoena as a witness, to protect from cruelty or vice we seize minor children and remove them from harmful environment. Who shall say that we may not require periodical physical examination by the state? Let it become a routine part of school life but extended considerably beyond the usual school age. Let us exact it from adults as we exact the payment of taxes or the performance of any public duty. It can be done. We are doing harder things than this every Some large industrial concerns already introduced periodical examinations among their workmen. (2) The federal government might well make periodical examinations of all civil service employes. Would it not be practicable for insurance companies to require periodical examinations or at least make a special rate to policy holders who complied with the requirement? Frequent periodical examinations could be easily secured. Let us make known the necessity for it. Teach it, preach it, from the cradle to senility. And when early diagnosis is made, early-enough-diagnosis be it always understood, the comparatively simple means required to effect a cure will find ready support

from an already thoroughly aroused laity. And the tuberculosis problem will eventually resolve itself into a never ending search for early cases, always of course with the enforcement of those measures already referred to which prevent gross infection and increase individual resistance.

Very early in the evolution of the scheme to insure universal early diagnosis, examinations will probably be relegated to a full-time health officer who will be an expert diagnostician and will be supplied with all necessary clerical and professional assistance. He will be sufficiently protected by his position from those who may be disgruntled by his diagnoses. He should have authority to require those of school age to attend none but the open air schools provided for such, to disbar workers from certain employments, to to curtail their hours of labor, and his mandates might be enforced in the same way that it is proposed to prevent the employment or the excessive employment of children, of pregnant women or of any other class whose health should be safeguarded for the public weal. With the actual treatment of the patients he will have nothing to do but will refer them to the family physician. His success will depend entirely on the support given to the measure by the medical profession, which must become sufficiently specialized in the subject to give cordial assent to his diagnosis and to modify certain deeply grounded present day conceptions of the nature of tuberculosis. The ordinary practitioner must be prepared to distinguish between the different types of early disease and advise accordingly. One may need perhaps only a few

months rest, or a modification of certain habits of work or play, the abandonment of vicious habits or inordinate amusements, and the adoption of more hygienic practices relative to ventilation, etc. For another, even with early incipient disease, may be required absolute and immediate rest and a ruthless suppression of the most cherished habits and most ardent desires of the individual. To reform these present conceptions and to make these necessary distinctions will require as radical a change in ideas as that caused by the introduction of aseptic surgery, and it will not be surprising if some hesitancy and even opposition is encountered from the more conservative members of the profession.

When frequent periodical physical examinations become routine the examiners will probably always detect disease before rales or other gross manifestations appear. Until that time comes the physician must do his utmost, and more than he has heretofore done, to insure early diagnosis among his clientele. He will not be misled by a tale of malaria, dyspepsia, pleurisy, neuralgia or neurasthenia. not sound an alarm merely because the patient is flat chested and emaciated but he will remember that many robust appearing individuals harbor advanced tuberculosis. He will never neglect the opportunity to make a thorough physical examination of the chest in a warm, quiet room, the patient stripped to the waist and preferably standing, or sitting upon a high stool. He will not rely upon some particular external sign but will employ all the common methods, with stick to one stethescope, avoid cumbersome and complicated instruments, and will not neglect to lisen to the expiration which follows cough. Almost every text book on physical diagnosis urges auscultation of the inspiration following cough. graphs have been written on it and vet I am persuaded that few examiners make use of it. We should listen, not to the cough—no one cares how a cough sounds through a stethoscope, not to a forced inspiration which fills your ear with muscle sounds and the grind of costal articulations, but, at the end of a natural expiration, after a slight but evident cough, which forces out the residual air, listen in the natural inspiration immediately following, listen for that still small voice which tells of disease. The physician may, with much credit to himself, refer his patient to a clinical expert in diagnosis, but there is no other way in which he can with honor avoid making an examination which sometimes may not be accomplished at one sitting but requires daily observation of temperature under varying conditions for several weeks. We cannot hury over an examination or get around it. If we are not willing to spend a half hour or an hour or two hours if necessary to diagnose or exclude tuberculosis we should send the patient to someone who is willing to do so. A busy doctor cannot be expected to spend time on a diagnosis without adequate pay for it and every city should have publicly paid specialists to examine indigent cases, but there should be on the part of the medical profession such an intelligent grasp of the whole nature of tuberculous infection and such a keen appreciation of the tremendous importance of early diagnosis that no member of the medical profession will ever under any circumstances allow a patient who comes to him for advice to escape a certain diagnosis or exclusion of active tuberculosis.

- (1) Webb and Gilbert. Immunity in Tuberculosis. Journal of the American Medical Association, September 26, 1914.
- (2) Theodore B. Sachs. The Campaign in Chicago for Medical Examination of Employes. The National Association for the Study and Prevention of Tuberculosis, 1914.

Harry E. Mock. An Efficient System of Medical Examination of Employes. The National Association for the Study and Prevention of Tuberculosis, 1914.

James A. Britton. The Relation of Medical Examination of Employes to the Hygiene of the Working Place and the Efficiency of the Working Force. The National Association for the Study and Prevention of Tuberculosis, 1914.

Knopf. The Modern Warfare Against Tuberculosis. New York Medical Journal, October 3, 1914.

Schereschewsky. Physical Examination of Workers. Public Health Reports, November 20, 1914.

OBSTRUCTION OF THE BQWELS.

R. L. Bradley, M. D. Roswell, N. M.

(Read before the Chavez County Medical Society, October 15th, 1914.)

Etiology symptoms and diagnosis is of the very greatest importance, that the general practitioner as well as the surgeon recognize the signals and prompt treatment be instituted. We will deal with dynamic ileus first. It is caused by external violence to the abdomen, acute peritonitis, and may follow laparotomy with rough prolonged manipulation of the bowels. It is the direct cause of death in some of the systemic diseases—pneumonia, typhoid fever, meningitis and nephritis.

The symptoms of acute dynamic ileus are absence of peristalsis and progressive uniform distension of the abdomen. The respiration becomes shallow from upward pressure. Rapid weak heart action at first caused by upward pressure, later by toxemia, profuse, persistent, recurring vomiting of an offensive fluid of brown or black color. The constitutional symptoms are those of toxic absorption. The urine is scanty and contains an excess of indican.

When the cause is due to peritonitis, pain, rigidity, tenderness and usually fever are present.

Mesenteric thrombosis and embolism differ from strangulation. The ileus may begin with agonizing pain, shock, vomiting, tenderness, distension, with blood-stained stools. Occasionally a palpable tumor can be felt. In the embolic form there is usually valvular disease of the heart. The embolism may develop in any part of the body.

Mechanical ileus without strangulation differs in symptoms. It is less sudden and painful. The onset of shock is slow in development. Symptoms of intestinal toxema, peritonitis, absolute constipation, vomiting, diminished peristalsis, progressive tympany.

Fecal vomiting in any form of intestinal obstruction is usually a terminal symptom of little value in forming a diagnosis. Obstructive ileus or mechanical obstruction of a gut by a plug or mass within its lumen, in its mild form, is due to fecal impaction. The onset is gradual, preceded by constipation, which is obstinate, alternating with diarrhoea. When the blockage is complete, distension and vomiting occur. The impaction is usually in the rectum or colon; can be felt by rectal examination. In the colon a doughy, moldable tumor can be made out.

Obstructions due to gallstones or to a foreign body may be diagnosed by the preceding history of the case, or by a skiagraph. Complete obstruction, due to stricture or tumor, is preceded by a history of repeated attacks of partial obstruction. The obstruction is slow in its development. The muscular coat of the bowel above the seat of narrowing becomes hypertrophied and the gut dilates. The peristalsis in this segment is palpable and visible. A marked noise can be heard on auscultation by the passage of gas through the constricted portion of the gut.

. Obstruction due to angulation, incident to adhesions, corresponds in type to obstruction without strangulation. The sudden painful onset without shock, the complaint being severe colic and often vomiting. The history of a previous laparotomy or peritonitis is usually obtained, particularly when drainage has been necessary. Strangulation or mechanical obstruction, as in constriction of the gut, in hernia, fibrinous bands incident to former peritonitis. Meckle's diverticulum, appendicular or omental adhesions or openings in the mesentery or omen-The symptoms come on after some violent muscular effort. hernial orifices should be examined if a

previous history of hernia exists. In strangulated ileus or obturator hernia, there will be no tumor but local pain and tenderness is suggestive. Diaphragmatic hernia can be made out from the chest signs. Duodeno-jejunal and retroperitoneal cannot be made out.

The characteristic symptoms of strangulation are sudden, violent and general abdominal pain, associated with shock, nausea, persistent vomiting and temporary or complete cessation of peristalsis, which is reestablished and sometimes exaggerated with recovery from shock. Tympanitis develops first in the strangulated gut; later it becomes general above the obstruction. The symptoms are those of intestinal toxemia. A symptom of gangrene is an abatement of pain and it rapidly followed by symptoms of a diffused peritonitis.

Intussusception or invagination of one portion of the gut into another, usually in the ileo-colic region, is an affection of infancy or childhood, and is frequently caused by polypi; sometimes follows trauma and diarrhoea. It may develop in the midst of perfect health. The occlusion may be partial therefore the gut not devitalized and the onset so gradual that the symptoms are comparatively mild, and are straining at stool, the passage of bloody mucus, mixed with feces, slight vomiting, colicky pains, and exaggerated peristalsis.

The detection of a soft tumor along the colon or by rectal examination can be felt.

Acute volvulus is a twisting of the gut upon its mesentery, and may involve nearly the whole of the small gut or one or more loops. It is usually in the sigmoid. In this form of strangu-

lation a rounded tympantic tumor may be felt in the left flank, or may extend above the umbilicus. There is usually absolute constipation, tenesmus and diminished capacity to rectal injections. The symptoms may be sudden in onset, or preceded by previous attacks of partial obstruction.

Gastro-mesenteric ileus is a condition only recently recognized. The stomach and duodenum are dilated by reason of a constriction at a point where the mesentery, together with the superior mesenteric vessels, passes in front of the duodenum. The duodenum is pinched between the tense mesentery with its superior mesentery vessel in front, and the aorta and vertebral column behind. The symptoms are nausea, vomiting, pain, gastric distension, constipation, severe thirst and scanty urine, followed by collapse. The differential diagnosis between this and acute dilation of the stomach is difficult.

I have not dealt with those forms of obstruction caused by neoplasm.

SOME DUTIES OF THE PHYS-ICIAN TO THE LAITY.

W. G. Hope. M. D. Albuquerque, N. M.

(Read before the Thirty-third Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., Oct. 5, 6, 7, 1914).

We should never forget that the doctor is primarily a teacher. "Doctor" is from the latin, docere, to teach.

Under the word doctor, Webster

gives three definitions: First, "Teacher." Second, "A learned man." Third, "A Physician, a member of the medical profession."

It is easy to excuse ourselves from this possibly most useful mission of the physician-teaching.

The modest physician thinks that the layman will consider him pedantic for volunteering information for which he not asked. Another says: "The average layman gives no attention to our volunteered instructions. Tomorrow we return to the home that we instructed today, and find the windows closed tightly, the baby sucking its thumb or the filthy 'pacifier,' the mother sweeping the room full of dust where her baby lies sleeping, possibly feverish from breathing-tract disease: the healthy child sleeping with the tubercular." We have found none of these objections to obtain to any decided extent.

True, occasionally, yes—just often enough to prove the rule—if modestly and tactfully given, laymen do appreciate such instructions from the physician. It is usually with persons whose education and home environment are below par, that we can do the most good in this line of duty, but we never hesitate to give the information, in our humble way, wherever we think it is needed.

For many years, we have supplemented oral suggestions with the written leaflet. We find the leaflet is generally acceptable and frequently other copies are called for.

We keep a variety of leaflets on various hygienic subjects and preventative medicine, with fever charts, in our buggy sachel, for distribution. These leaflets can be had from any state board of health, or for a very few dollars any physician can have printed his own leaflets, embodying his own or text book information.

In this day of universal reading of newspapers and magazines, and of current literature in general, much information—often extremely inaccurate—is put before the people. The popular idea of anything scientific is always vague and inaccurate. Some of this matter is praiseworthy and educating. Some editors are discriminating, careful, conscientious in subject and treatment of the subjects that they put before their readers.

Many other editors appear to have no other object in view than to publish catchy, revolutionary, sensational matter. For instance, some one, with no pretense to medical education or medical knowledge is sent across continent or ocean to write articles for some lay publication on medical or surgical subjects.

With sensational headlines and extravagant, dogmatic language, he will write pages about some, to him "Wonderful Medical Discovery." Our patients will read and come to us for more information. Possibly the "Discovery" is as old as medicine or as new as Freidman's turtle juice or the Herr Professor's "Twilight Sleep" in child-birth.

Whatever the fake may happen to be, the person enquiring of the family physician has been impressed with the "Discovery." They inquire as to its merits. With them our words have weight. The physician should take time to disillusion them. He should do so in a patient and respectful spirit. The lay and medical journals that refute such spurious "Science" should be

found on the table of his reception office.

You are all familiar with the journals that are leading in this laudable work.

One of the most educating and fake annihilating efforts in this line published recently appeared in the Ladies' Home Journal for September, 1914. This magazine published a very effusive, laudatory article on The Twilight Sleep in Labor. The writer, a woman, had visited the "wonderful scientists" at their home in Germany and had been "privileged" to see and take pictures of the happy mothers, who had been so fortunate as to have the professional services of the great scientists.

The pictures of the playful youngsters were photographed in various poses, and pictures published to illustrate how much more happy and healthy they were than the children who were attended at birth by the "old school doctors." She photographed these children's smiles and antics as they disported themselves among the shrubbery and flowers, indicating one of the most touching and playful sights ever witnessed in the open air.

Now, The Ladies' Home Journal is great enough to be honest, and it is great among other reasons because it is honest. It has a fit sense of its responsibility to its readers. Unlike the physician and the publication that say "It is not worth while; the public like to be humbugged. They (the public) give no attention to honest instruction," this great Journal, the greatest of its class in the world, for when it publishes an article on government, it is usually by a statesman of national or international reputation; when it gives

its readers an article on education, it is by an educator of national repute, not by some obscure Mrs. Hysteric, this publication that goes monthly into more homes than any home journal published, sent a woman to Frieburg, Germany, to write up Twilight Sleep; and the wonderful story was written. Beautiful photographs were taken of mothers and babies. The story was told with all the Sunday Edition characteristic trimmings, but on the last page of this article over their own signatures appeared letters from four of the best American authorities on obstetrics. Professor Green, of Harvard: Professor Williams, of John Hopkins: Professor Hirst, of the I versity of Pennsylvania, and Professor DeLee, of Rush. These letters are unanimous in tone. One only will I quote, Prof DeLee's: "In November, 1913, I spent four weeks in Freeding, and had an opportunity to observe personally and study critically about ten cases of childbirth conducted in Professor Kroenig's own clinic. The impressions received and opinions formed were decidedly unfavorable to the method of 'Twilight Sleep.'

"In all the ten cases the birth pains were weakened and labor prolonged; with two of the women for almost two days. In three cases pituitrin had to be given to save the child from imminent asphyxia.

"In five of the cases instruments had to be used. In my opinion two of these were directly rendered necessary by the paralyzing effects of the drugs scopolamine and morphine. Extensive lacerations resulted.

"Several of the women became delirious and so unruly that ether had to be administered in addition to the scopolamine and morphine, the result being that the infants were born narcotized and aspyhxiated to a degree. One had convulsions for several days.

"All these occurences confirmed my own experience with the drugs. I had used them when first proposed twelve years ago. At that time they were extensively employed in Europe and America, but were soon discontinued because they were found impractical and dangerous.

"I visited the famous maternities of Berlin, Vienna, Munich and Heidelberg; in all of them upon inquiry I was told that this method had been tried and discarded."

Should we all each day, take time to give a few more minutes to teaching, and clinch our advice with a few brief plainly worded leaflets, we would do more to redeem the lay mind from error.

KIDNEY EFFICIENCY.

H. A. Ingalls, M. D. Roswell, N. M.

(Read before the Meeting of the Chavez County Medical Society, January 21st, 1915).

The splendid work of Roundtree, Geraghty, Cole and others, have proven that in the phthalein test we have a diagnostic measure of very great importance.

It has been found by experimentation and in clinical practice that sulphonephthalin is excreted almost entirely by the kidneys, as only a minute amount, even after intravenous injections, has been found in the bile and not a trace in the other secretions of the body. The kidneys, when normal, will excrete fifty per cent of the entire dosage within the period of one hour, no matter how great the dilution.

We have known for years that some of our cases reveal albumin and casts in the urine; have odema and become anemic. Many of these conditions are the result of toxaemia and are not cases of Bright's, as at one time considered. With the test under consideration we are now in a position to make a diagnosis and a prognosis. In cases of true nephritis we may determine the point to which the disease has progressed and the probability of being able to prolong life.

In prospective surgical cases, where genito-urinary trouble is present, the test will advise whether to operate or treat the case along other lines.

In obstetrical practice the elimination of the phthalein will act as an indicator in eclampsia and a guide to the conduct of those cases showing albumin or other evidence of kidney distress.

In one of my cases, a man of 45 years, weighing about 190 pounds, a favorable prognosis was given when he eliminated 37 per cent in one hour. Clinically, the individual presented a grave picture. General anasarca was present; respiration and circulation abnormal and the patient unable to rest other than in an invalid's chair in a semi-reclining position.

In acute nephritis the test should be made frequently. In one case the first injection gave a return of but 5 per cent in one hour; while in a short time the elimination increased to 40 per cent and the patient could be considered out of danger.

In one of Geraghty's cases of acute scarlartinal nephritis, where the symptoms were those of grave toxaemia the elimination was 44 per cent. Here the patient made a nice recovery and the symptoms of nephritis cleared within a few weeks. In contradistinction to the cases cited, we have that class of patients who have none, or few, of the clinical symptoms of nephritis in which the phthalein test will reveal a very grave condition of advanced nephritis.

Given a case complaining of vertigo, slight odema and occasional loss of consciousness, without albumen and casts and often the test will show an elimination of from 3 per cent to 10 per cent. Such a result will indicate to you the seriousness of your patient's condition, even though the clinical picture is not alarming.

One could go on for hours by quoting cases that have demonstrated the value of the test, but the scope of this paper is only to call your attention to its value and cause you to think seriously of its employment in your daily work.

The technique is simple: 6mg. in 1 c. c. solution is injected into the lumbar muscles. One hour after injection the urine is voided by patient or withdrawn by catheter. Render alkaline and dilute to 1000. With a standard solution, alkaline, in which 6 mg. of phthatrin is dissolved in 100 cc of distilled water is used as an indicator.

By comparing the urine, diluted to 1000 cc, with the standardized solution, the reading is made as to amount of phthalein eliminated.

CONSTRUCTION CAMP, ELE-PHANT BUTTE, NEW MEXICO.

J. Dale Graham, M. D., Camp Physician, Elephant Butte, New Mexico.

(The following is taken from an article which appeared in the December, 1914, issue of Engineering News, permission to use same having been obtained from Doctor Graham).

HOSPITAL DEPARTMENT.

The hospital is somewhat isolated, though conveniently situated near the center of construction activities. The building is of pebble-dashed adobe, well finished and equipped. For the care of the sick and injured, there are two private rooms and a ward. (A well regulated field hospital should have two or three private rooms on account of the absolute necessity of isolation in many cases.) Beds are furnished for twelve, but more can be accommodated.

The arrangement of the building is such that the reception room can be utilized as a second ward, as has been necessary a number of times on this work. The dining room, kitchen and steam-heating apparatus are in the basement. The operating room is well equipped and splendidly lighted. The dispensary is well filled with such medicines and supplies as are required, besides a few drug sundries, the latter articles; however, being handled chiefly by the commissary.

Besides the physician and nurse, the

force includes an orderly and a house-keeper (cook). A contract is also in force with a consulting surgeon, who makes visits on request, assisting in any manner of operation at one specific price.

Stretchers and crutches are stationed at convenient points about the work, as are also small first-aid emergency kits, containing peroxide, cotton and bandages. If the case is one in which actual hospital confinement promises a salutary effect in reducing the days incapacitated to a minimum, the patient is required to remain. Otherwise, he may go home, reporting as ordered for treatment. However, to get credit for meals he must take same at the hospital. If incapacity from injury extends to or beyond 15 days, claim is made for compensation, as provided under the Congressional law.

Immediate report of injury is made on specific blanks, giving name, age, kind of work, salary, character of injury, witnesses and circumstances attending the inquiry. A duplicate of this report is retained. An employe laying off on cacount of sickness or injury must have an order from the physician before he will be allowed to return to duty.

The physician makes to the engineer, ten-day, monthly and yearly reports, covering the health of the camp, sanitation, number and ratio of days lost on account of injury and sickness, and points of interest in the general management of his department. Drugs and hospital supplies are purchased in large quantities. Duplicates of all orders, invoices and reports are kept on file.

A compulsory deduction of \$1 per month is made from each pay check, which entitles the employe to all reasonable dispensary or hospital service. It is found that there is practically no disposition to abuse the privilege. At this time the hospital fund is showing a balance in its favor.

PREVENTIVE MEASURES.

The business of the camp physician is not so much to treat the sick as it is to create conditions which will keep sickness at its lowest ebb. To this end, for instance, with the first suspicion of a disease from which there may be possible dissemination, precautions are taken at once without waiting for a positive diagnosis. If the suspected disease is one from which contagion may occur from human wastes, a flyproof receptacle, usually a garbage can, is placed conveniently near, into which all body wastes are thrown, where they receive special treatment before being carted away.

Typhoid prophylaxis through vaccination has been introduced. It may be of interest to note that not an employe has lost a shift from its effect.

Each applicant for work is given an employment slip, which must be O. K.'d by the physician before his name can appear upon the time book. Applicant's age and conjugal condition are taken, and a record made of the notification address, to be used in event of serious sickness or injury.

Physical examination, as practiced here, is more in the nature of an inspection. Gait is noted, eyes, tongue and skin inspected, and examination made for rupture and heart disease. If such examination suggests unfitness, a more thorough one is made. Special attention is given to employes requiring special standards.

It has been urged that contractors

would be handicapped in securing labor if insistence was made upon examination as to physical fitness. To disprove this it may be stated that since this system was installed, a little over two years ago, only three out of a total of over 3000 applicants have refused to be examined. There have been as many as 347 examined in one month without any objection whatever. A very few make a mild protest, but a little tact overcomes this.

A matter having bearing both upon the economic as well as the health feature may be mentioned here. There has been a determined effort in this camp on the part of the construction engineer to limit to the very minimum the importation of liquors. The effort has yielded a fine return. There is practically no drinking, and a drunken man is so rare an exception as to occasion great surprise. It is generally known throughout the camp that drunkenness or intemperate drinking will result in the dismissal of an emplove. Early in the work it was stated that such strict rules would handicap the Service in securing workmen. It seems to have had the opposite effect.

SANITARY DEPARTMENT.

The question of sanitation at Elephant Butte has naturally resolved itself largely into a relentless war upon the fly, and the efficient removal of stable, human and kitchen wastes. In this camp a stable owner is required to keep his corral well cleaned, failure resulting in the work being done for him at his expense. The second offense cancels his permit to keep horses.

The matter of abolishing all private corrals in this camp is under advisement. Should this be done, persons

who still desire to keep horses will be required to stable same in the government corral, for which a maintenance charge will be made. Hesitation along this line arises chiefly from the fear that such drastic action might affect the labor question, on account of the fact that a great many of the laborers are from the villages and ranches at a considerable distance, and come to camp in wagons.

However, it is believed that this course would effectually do away with the fly nuisance. It is noted that fly traps at the government corral catch but few flies, the reason being that the wastes are carted off every morning and there are no breeding places. It is also to be noted that at the upper camp, where there are no corrals, flies are so scarce that screens are almost unnecessary.

Fly traps are placed here and there about the camp, and in this way millions of flies are caught. These traps are put in place at the very earliest moment of spring, when flies begin to breed. It is believed that the ceiling of these traps should be painted white and the floors of a dark color, carrying out a little further idea that the fly after feeding on the bait will have just so much more light above to aid in his entrapment, as, after feeding he moves to the point of greatest light.

GARBAGE DISPOSAL.

The disposal of garbage and general camp wastes in a camp composed largely of single men in bunk houses, becomes a rather simple matter, but where a camp assumes the nature of a small city of 2500 people, chiefly foreign, where you have all the problems

of village sanitation except law enforcement, you have then confronting you a complex problem.

Some 150 garbage cans are stationed about the camp, supplying 524 families. All camp refuse, except a part of the kitchen garbage, is dumped into these receptacles and carted to a specific dumping yard, at which point, it is burned. All such wastes are removed by a man who is paid a small salary, but who depends chiefly for his income upon the food value of the slops, which he removes to a remote point and feeds to hogs.

It is believed that the garbage cans mentioned are a very small source of fly breeding, for two reasons: First, the frequent removal, and second, that practically all cans are used in the disposal of a great amount of wood ashes. Just how to keep lids on garbage cans is as yet a problem. If each family had an individul can, responsibility could be placed and the solution would be easy, but since garbage cans are community affairs, no one family can be held accountable.

NIGHT-SOIL DISPOSAL.

The location of the greater part of this camp is such that a complete sewer system with septic tanks and filter beds is impracticable, although desirable. The only disposal practicable is by the ordinary privy vault. This has necessitated the building of many privies.

At first there were built on ordinary lines with screened gables and screened doors, and self-closing lids. The latest privy design has such a seat that fouling, ordinarily a source of much trouble, is improbable. A solid door, hung inside, now replaces the screen

door, which, when closed, keeps the vault fairly dark, so that flies attracted by odors are found near the roof about the screen.

Such a disposal of night soil is admittedly far from ideal, but it seems the most practical method under existing conditions. Privy vaults are treated frequently with chloride of lime. If ground water rises in them, the surface is floated over with crude oil. If particularly malodorous, crude carbolic acid is used.

INSPECTION.

The camp is policed daily by a sanitary officer, who is responsible to the camp physician. This inspector's duties include attention to drainage, the treatment of stagnant pools with crude oil, the destruction of causes of malodors, attention to closets, the spraying of bunk houses with a 10 per cent solution of carbolic acid and Vermin-go, twice monthly.

Where fumigation is impracticable, and such is the case where construction is being pushed with three shifts, the use of Vermin-go is very effective in abating a nuisance from insects, especially bed bugs. In one of the bunk houses the sprinkling of formalin upon the floor has been used apparently to a good advantage in driving away insects of various kinds, and as a reoderant.

SEWERAGE AND DRAINAGE.

The camp is well drained, except a part of the residence section of the lower town, which is so flat and of such extent that sewerage is impracticable. For this part of the camp a system of open drain ditches for surface water is provided, which receive

careful attention from the sanitary officer. As before stated, sewage from the mechanics' quarters discharges into a septic tank. The upper town discharges its sewage into a septic tank with filter beds.

CONCLUSIONS.

Three years of experience in this camp has led the writer to the following conclusions:

That anything tending to create a better moral or sanitary environment increases the efficiency and output of the employe.

That the price of good sanitation is an eternal fight—a continuous campaign,

That good sanitation, even though expensive, pays a good return—besides it is humanitarian.

That perfect disposal of camp wastes will produce the millennium in camp life—a flyless camp.

That liquors are not only useless and undesirable in camps, but a real detriment from every point of view.

That examination as to physical fitness is not only practicable, but advisable.

That under average conditions private stables should not be maintained, and that there must be an eternal fight for cleanliness.

Abstracts

HEALTH BOARDS AND THE TAXPAYER.

"Appropriations for health purposes in many communities have in the past been granted reluctantly, and in most instances in sufficient amounts for effective work. It has been difficult to convince the taxpayer and the public official that there would be an adequate return for money expended.

Health to them has seemed an individual matter," says The Journal of the American Medical Association, "and health boards have been compelled to beg for every dollar. An improvement, however, is taking place, and the amount per capita of health appropriations is increasing. A more intelligent understanding of the objects of public health expenditures and of the returns to be had is developing. In some instances, the taxpayer is now on the other side of the proposition. He demands of the health board, having approved liberal appropriations, that it prevent epidemics which endanger the health and lives of himself. his family and his friends. Spartanburg, S. C., has been for several years a center for the study of pellagra by a scientific commission. This has no doubt promoted the study of health matters in general in that community, with the result that the local health service has been well supported, while the people have come to recognize the possibilities of disease prevention. With the idea in mind of the seasonal recurrence of certain infectious diseases, the Spartanburg Herald says:

"'For the amount of money the citizens of Spartanburg are putting up these days for the public health department they have reason to expect service and results. * * * Just at this season of the year and a little later on, in February and March, most cities are visited by * * * * scattering cases of diphtheria and epidemics of measles and whooping-cough. Measles and whoopingcough usually spread until they have exhausted the supply of youngsters who have come on since the last year's epidemic, while diphtheria, because of its more violent character, is usually held in check. But the question in our mind is whether these things have to be. In modern days is there no way to prevent so much suffering and sickness on the part of the little children of a city? The Spartanburg health authorities could in no way carry their services nearer the homes of the people than by making a study of this question and taking every precaution possible to hold these things in check this year.

"It goes without saying that the health board of Spartanburg will do its utmost, but this change of attitude of the taxpayer tohopeful. It also emphasizes the obligation on the part of health departments to make good."

ATROPIN IN DYSMENORRHEA.

After referring to former papers on the pathologic physiology of uterine bleeding (Journal A. M. A., Oct. 22, 1914, p. 617), Emil Novak, Baltimore (Journal A. M. A., Jan. 9, 1915), says that after recent menstrual disturbances no therapeutic results have as yet been yielded by theoretical considerations as to the influence of the vegetative nerve system on the menstrual function. It is interesting, however, to know that in the case of dysmenorrhea, recent studies in this line seem to have suggested a definite method of treatment by atropin, and a number of articles have appeared in German publications on the subject. refers to the type so characteristically observed in young nulliparous women, frequently associated with scanty menstruation, and sometimes with sterility. pain, often exaggerated by the nervous or hysterical patient, is sometimes very severe, and is looked forward to with dread. As a rule, it is characterized as cramp-like or colicky, beginning a day or two before the actual onset of menstruation, and ceasing with the establishment of the flow. It is variously spoken of as 'spasmodic' or as "essential" dysmenorrhea, and is not dependent on any demonstrable pelvic disease, though in a considerable number of cases there is an underdevelopment of the generative organs, or actual infantilism. Treatment has been heretofore unsatisfactory, and surgery has been invoked with equally unsatisfactory results. The explanation most accepted is that the pain is due to a colicky contracture, a spasm of the uterine musculature. The use of atropin in its treatment is based on the fact that atropin diminishes the irritability of the autonomic nerve endings in the uterus. The method of injecting a solution of atropin directly into the cervical canal, suggested by Drenkhahn, was taken up by Novak of Vienna in 1911. Novak administered the atropin in pills containing 0.5 mg., three being given each day beginning just before the expected period. It is less disagreeable than Drenkhahn's method, especially in the case of virgins. Novak has reported 38 cases, with favorable results in 30. In seven cases the treatment failed to relieve the pain and he is inclined to believe that the failures were due to an insufficient dosage. Novak of Baltimore's experience has been more encouraging. He has followed his Vienna namesake's example in giving it by the mouth, frequently in smaller or larger doses than recommended by him. The cases responding more favorably, speaking generally, are those in which the atropin has been pushed to the point of tolerance. His experience is still comparatively small, and many of the cases are of very recent date. While there has been some failure, there have been some very striking successes. In cases in which the classic picture of spasmodic pain is presented by unmarried women, the atropin treatment is indicated, with preliminary pelvic examination, according to his judgment.

NEW AND NONOFFICIAL REMEDIES.

Since publication of New and Nonofficial Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry or the American Medical Association for inclusion with "New and Nonofficial Remedies."

Cantharidin. The anhydride of cantharidic acid preparations of cantharidin are used in place of corresponding preparations of cantharides and have the advantage of being cleanly, and more uniform in strength. A 0.1 per cent solution of cantharidin in a fixed oil raises blisters when kept in contact with the skin. (Jour. A. M. A., Jan. 2, 1915, pj. 53).

Benzene, Medicinal. A liquid convisting almost entirely of benzene, CoHo. Medicinal benzene has been used in the treatment of leukemia. In many cases the improvement is such as to suggest an apparent cure. A large number, if not all, cases relapse or succumb to the toxic action of the benzene. The drug is in the experimental stage and should be used with caution. (Jour. A. M. A., Jan. 2, 1915, p. 54).

Benzene, Merck., H. P. Crystallizable. A

brand of medicinal benzene. Merck. and Co., New York. (Jour. A. M. M., Jan. 2, 1915, p. 54).

Leucocyte Extract. An extract of leucocytes obtained from exudates produced in the pleural cavity of rabbits or other animals. It is said to be of value as an aid to specific serums or antitoxins and vaccines. It is claimed to be of use itself where the nature of an infection is not known. Its use is in the experimental state. (Jour. A. M. A., Jan. 2, 1915, p. 54).

Leucocyte Extract, Squibb. A leucocyte extract prepared according to the method of Hiss. It is sold in syringes containing 10 c. c. E. R. Squibb and Sons, New York City. (Jour. A. M :A., Jan. 2, 1915, p. 54).

Silver Citrate, Merck A brand of silver citrate admitted to New and Nonofficial Remedies. Merck and Co., New York. (Jour. A. M. A., Jan. 2, 1915, p. 54).

Silver Lactate, Merck. A brand of silver lactate admitted to New and Nonofficial Remedies. Merck and Co., New York. (Jour. A. M. A., Jan. 2, 1915, p. 54).

Digitoxin, Merck. A brand of digitoxin admitted to New and Nonofficial Remedies. Merck and Co., New York. (Jour. A. M. A., Jan. 2, 1915, p. 54).

Leutin. An extract of the killed cultures of several strains of the Treponema pallidum, the causative agent of syphilis. It is employed for the diagnosis of syphilis. It is of use in the examination of tertiary cases, but rarely gives a positive reaction in primary cases or in untreated secondary cases. Leutin is supplied as:

Leutin, Mulford. Packages sufficient for a single test, for five tests and for fifty tests. The H. K. Mulford Co., Philadelphia. (Jour. A. M. A., Jan. 2, 1915, p. 343).

Glycotauro Capsules (half size). Each capsule contains Glycotauro (see N. N. R.) 0.15 Gm. Hynson(Wescott and Co., Baltimore, Md. (Jour. A. M. A., Jan. 23, 1915, p. 343).

PROPAGANDA FOR REFORM.

Stomach Bitters. Experiments conducted by A. J. Carlson and his co-workers at the University of Chicago show that the wide spread use of bitter drugs as a means of stimulating the appetite or aiding digestion is a therapeutic fallacy | He finds that such drugs as gentian, quassia, calumba, hops, condurango and the elixir of quinin, strychnin, and iron do not increase hunger contractions of the stomach and the related phenomenon nor induce increased secretion of hyjdrocholoric acid or pepsin. (Jour. A. M. A., Jan. 2, 1915, p. 58).

Bannerman's Intravenous Solution. This solution was refused recognition by the Council on Pharmacy and Chemistry because vague, indefinite and misleading statements were made regarding its composition, because it was recommended for anemia, tuberculosis and syphilis under exaggerated and unwarranted claims and because the intravenous injection of complex and indefinite mixtures is unscientific and dangerous. The proprietors having submitted to the Council a revised statement of composition and a revised advertising circular, Bannerman's Intravenous Solution was again refused recognition, partly because the statement of composition was unsatisfactory but mainly because of the unscientific character of the solution and the unwarranted therapeutic claims which are made for it (Jour. A. M. A. Jan. 2, 1915, p. 70).

Prunoids. Prunoids (Sultan Drug Co.) are tablets said to be "Made of Phenolphthalein (one and one-half grains in each), Cascara Sagrada, De-emetinized Ipecac and Prunes." The A. M. A. Chemical Laboratory reported that Prunoids appeared to be essentially a phenolphthalein tablet. Council on Pharmacy and Chemistry held Prunoids in conflict with its rules because the statement of composition was incomplete and therefore meaningless, because unwarranted therapeutic claims are made for them, because the name "Prunoids" does not indicate the chief constituent but gives the false impression that they depend on prunes for their effect and because it is irrational to prescribe a well known drug under a misleading name (Jour. A. M. A., Jan. 2, 1915, p. 71).

Sedobrol "Roche." Sedobrol (Hoffman LaRoche Cherical Warks) is stated to contain "17 grains Sodium Bromid, 1.5 grain common salt, fat and seasoning" and to furnish "on solution in hot water, a very palatable Bouillon." The advertising "literature" advocates its use for stage fright and arteriosclerosis and recommends the use of a large dose of bromid in the guise of a cup of bouillon in many conditions. It is even recommended to use Sedobrol in place of salt, simply to flavor food. The Council on Pharmacy and Chemistry held that Sedobrol, Roche was unscientific, that unwaranted therapeutic claims were made for it and that there was evident intention to mislead both patient and physician into useless and pernicious medication. (Jour. A. M. A., Jan. 2, 1915, p. 71).

Echtisia, Echthol and Echitone. Echtisia (Wm. S. Merrell Cherical Co.), Echthol Battle and Co.), and Echitone (Strong, Cobb and Co.) are proprietaries, each of which claims echinacea as its chief constituent. In 1909 the Council on Pharmacy and Chemistry reported that the extreme and extravagant claims which are made for this are not supported by evidence. Echinacea is not often prescribed under its own name but is commonly employed in the form of proprietaries which in addition to echinacea contain other little used or obsolete drugs. To call attention to the unwarranted and often absurd claims which are made for this class of mixtures the Council reports on three of these: Echitsia which is said to be made from echinacea, wild indigo, arbor vitae and poke root, Echthol, hich is said to be made from echinacea and arbor vitae and Echitone which is stated to represent echinacea, pansy and blue flag. In each case it was found that most or all the extravagant and impossible claims which have been made for echinacea were made made for the proprietaries and that in addition almost equally extravagant claims were made for the additional drugs contained in them (Jour. A. M. A., Jan. 2, 1915., p. 71).

Theobromine versus Caffeine. Lester Taylor finds that caffeine gives a moderate relief from the cardiac symptoms in myocardial insufficiency, but also causes the constant appearance of distressing nervous and gastric symptoms. He further finds that the clinical diuretic action of caffeine may be better performed by large doses of theobromin sodium salicylate, N. N. R.

without the unpleasant side-effects. Arch. Int. Med., Dec. 1914, p. 769).

Neurosine, Dioviburnia, Germiletum and Paupebrine. The Council on Pharmacy and Chemistry reports on Neurosine, Dioviburnia, Germiletum and Palpebrine, shot-gun proprietaries typical of the polypharmacy of past decades, put out by the Dios Chemical Co., St. Louis.

Neurosine is said to contain, in each fluidounce "Bromid of potassium, C. P. 40 grains, Bromid of sodium, C. P. 40 grains, Bromid of ammonium, C. P. 40 grains, Bromid of zinc 1 grain, Extract Lupulin 32 grains, Cascara sagrada, fl. ex. 40 minims, Extract Henbane .075 grain, Extract Belladonna, .075 grain, Extract Cannabis Indica .60 grain, Oil Bitter Almonds .060 grain, Aromatic Elixirs." No physician think of prescribing all of the drugs in Neurosine for any one condition. The Dios Company urges the use of this nostrum for a host of conditions and without due consideration of its potent constituents. Not content with recommending the promiscuous use of this already too complex mixture, the Dios Co. advises physicians to combine it with other drugs.

Germiletum is a member of a large class of alkaline antiseptics with excessively complex formulas. The formulas on different styles of Germiletum labels and circulars vary so much that one cannot tell what composition the exploiters of it intend to claim for their nostrum. Germiletum is recommended in many conditions and in a way to lead the physician to place false confidence in it.

According to the label every fluid ounce of Dioviburnia contains "3-4 dr. each of the fl. extracts, Viburnum Prunifolium, Viburnum Opulus, Dioscorea Villosa, Aletris Farinosa, Helonias Dioica, Mitchellae (sic) Repens, Saulophyllum Thalictroides, Scutellaria Laterifolia." The label also declares that Dioviburnia contains 18 per cent of alcohol. As the named fluid extracts in the quantities given require a much larger content of alcohol in Dioviburnia, either the alcohol statement or the formula is incorrect. This complex preparation of drugs generally considered worthless is recommended by extravagant and unwarranted

claims for a large number of widely differing female disorders. In a way the Dios Co. seems to recognize the inefficiency of Dioviburnia, for it frequently suggests that it be used in combination with drugs of known value.

Palpebrine is claimed to be a solution of stated amount of morphine sulphate, zinc sulphate, mercuric chloride, boric acid and salicylic acid. It is termed "A Reliable External Ocular Antiseptic." It is asserted that "With the assistance of Palpebrine the general practitioner can successfully treat all cases of external eye diseases ordinarily encountered in his practice." Even more dangerous is the recommendation of Palpebrine for the prevention of ophthalmia in the newborn (Jour. A. M. A., Jan. 9, 1915, p. 165).

Hayden's Viburnum Compound. preparation, according to the advertising matter, depends for its action on Viburnum opulus, Dioscorea villosa and aromatics. The label admits the presence of 50 per cent alcohol. Its use is advised in the treatment of female disorders, cramps, etc. A report of the Council on Pharmacv and Chemistry states that, even if it contains the ingredients claimed (it has been reported that Viburnum opulus has not been on the market for years), the therapeutic action of the preparation depends almost entirely on the alcohol which it contains. The Council fears that the use of this preparation may initiate the alcohol habit in girls and women and publishes its report as a protest against its use (Jour. A. M. A., Jan. 23, 1915, p. 359).

Peebles Epilepsy Cure. The Dr. Peebles Institute of Health, Ltd., Battle Creek, Mich., advertises an "epilepsy cure." The "treatment" was examined in the A. M. A. Chemical Laboratory. It consisted of two bottles, "No. 1" and "No. 2." "No. 1" was a liquid containing extractive matter, had an odor resembling celery and valerian and contained 11.40 per cent absolute alcohol. "No. 2" was a liquid, having a valerian-like odor and containing as essential constituents ammonium bromide and potassium bromide, equivalent to 16.8 grn. potassium bromide per fluiddram, the recommended dose. Thus, the treatment consists essentially of

bromides and is, in no sense, a cure and not free from danger (Jour. A. M. A., Jan. 30, 1915, p. 455).

Radio-Rem. The Radio-Rem outfit is advertised by Schieffelin and Co. It is said to produce water charged with radium emanation by inserting rods stated to be coated with radium sulphate in water. Not only is the internal use of radium emanation without proved value, but the amount of emanation said to be produced by the apparatus is far below the amounts generally used by those who believe in its efficacy. It is claimed that this outfit supplies a substitute for natural mineral ater; but there is no proof that the value of mineral aters depend on contained radium emanation. (Jour. A. M. A., Jan. 30, 1915, p. 456).

G. G. Phenoleum Disinfectant. This is a disinfecting solution sold by the G. G. Phenoleum Co., New York. It was found ineligible for New and Nonofficial Remedies by the Council on Pharmacy and Chemistry because unwarranted claims were made for it and because the disinfectant power was not stated on the label, as required by the Council (Jour. A. M. A., Jan. 30, 1915, p. 456).

Phytin and Fortossan. Phytin, sold by A. Klipstein and Co., New York, is an organic phosphorus compound, the acid calciummagnesium salt of phytinic acid. Council on Pharmacy and Chemistry rejected Phytin because unwarranted and exaggerated therapeutic claims were made for this product, based on the entirely undemonstrated assumption that phosphorus is assimilated only from organic combination, that a long list of disease are due to deranged phosphorus metabolism and that such diseases are benefited or cured by Phytin. The Council also refused recognition to Fortossan, a preparation of Phytin and sugar of milk (Jour. A. M. A., Jan. 30, 1915, p. 456).

Venarsen. Venarsen, marketed by the Intravenous Products Co. for 'the treatment of syphilis, pellagra, tuberculosis, anemia, etc., is a secret preparation. One circular suggests that Venarsen is a sort of an improved salvarsan, but in reality it gives no clew whatever as to the real character of the preparation. Another circular suggests

that Venarsen is a shot-gun combination containing arsenic, mercury and other antispyhilitic drugs. It is not only the right but the duty of physicians to know the essential composition of what they prescribe; a physician who uses a remedy the composition of which is kept secret, even in part, is not doing his duty to his profession nor to his patient. It is almost criminal for physicians to use a preparation of secret composition and to administer it by intravenous injection—a method which in itself is altogether likely to give rise to accidents. (Mo. State Med. Jour., Jan., 1915).

Book Reviews

MOTHERHOOD E. S. Harris, M. D. Independence, Missouri.

All practicing physicians realize the need of some reliable and complete manual of instructions for the expectant mother. Doctor Harris has prepared this little monograph to supply this need and it has been long enough before the profession for its usefulness to become known. The profession may obtain a supply from the author, the price is ten cents per copy in lots of twenty-five or more with purchaser's name and address on the front page.

LOCAL AND REGIONAL ANESTHESIA.

Local and Regional Anesthesia, including Analgesia. By Carroll W. Allen, M. D., of Tulane University, New Orleans, with an introduction by Rudolph Matas, M. D., of Tulane University, New Orleans. Octavo of 625 pages with 255 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Clith \$6.00 net; Half Morocco, \$7.50 net.

Doctor Allen has written a classic. He has successfully surveyed the entire field of local and regional anesthesia, giving in one volume its essential application to surgery—major and minor.

Tutored under the care of that master mind in surgery, Rudolph Matas, one could but expect a splendid work and this excellent review of the entire subject is not disappointing.

The present reviewer well recalls the early days of local anesthesia and the prophecy of Doctor Matas as to its future wide field of application, for he was, in his student days, privileged to come into intimate contact with the work being then done by Doctor Matas in his wards in the Charity Hospital in New Orleans. Doctor Allen has had ample opportunity to take advantage of this work as it was broadening and developing and was eminently qualified for the preparation of this volume.

No practitioner can afford to be without it.

PROGRESSIVE MEDICINE.

Vol. XVI., No. 4.

HOBART AMORY HARE, M. D.

Assisted by

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The final number of volume 16 of Progressive Medicine is fully up to the standard. This number includes a review of the recent advances and discoveries and the literature of diseases of the stomach, kidneys, genito-urinary organs as well as of the surgery of the extremities, shock, infections, fractures and dislocations, and tumors. A practical therapeutic referendum contains much valuable information.

THE TONSILS.

Faucial, Lingual, and Pharnygeal. With Some Account of the Posterior and Lateral Pharnygeal Nodules.

By Harry A. Barnes, M. D.

Instructor in Laryngology, Harvard Medical
School, Etc.

Illustrated.

C. V. Mosby Company, St. Louis, Mo., 1914. \$3.00.

This is a timely book upon a most important branch of medical work. The author loses no time in attempting to go into long polemic discussion as to this or that theory and contents himself with a statement of facts as he sees them and makes these facts the basis of any theories advanced.

The illustrations are all original, a notable point in these days of compilations and borrowed plates.

The reviewer has read this monograph with much profit and takes pleasure in recommending it to the profession.

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The New Mexico Medical Iournal

Volume XIII MARCH, 1915

No. 6

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The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

You want a larger and better journal
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JOURNAL."
FAVOR THOSE WHO FAVOR US

Apropos of the Doepp bill before the New Mexico Legislature (the bill offering certain amendments to the present medical law) there has been some discussion in the public press and some opposition, chiefly from the Albuquerque papers. We reproduce below a reply of Doctor W. T. Joyner, president of the New Mexico Medical Society, to these criticisms. This reply was sent to the papers and was published by some of them. We reproduce it here that we may keep the record straight and at the same time because it is as fair a statement of the cause as we could expect to have.

Since the introduction of a bill by Senator Doepp to amend the existing medical law, I have noticed adverse criticisms by some of the newspapers of the state. Criticism which does not touch one real provision of the bill and reflects on the honesty of purpose of the medical profession of the state as a whole, and the New Mexico Medical Society in particular. I cannot, as an official of that body, let pass without a statement of fact regarding its provisions and the reasons for its support by the medical profession of the state.

All laws regulating the practice of medicine and all laws relating to quarantine; sanitation and the public health are for the protection of the people of the state and not, as some seem to think, for the protection of the medical profession. Medical

organizations necessarily take up these questions as they pertain to matters in which they are specially interested and have special training. They deem it part of their duty as good, loyal citizens to render this service to the public. The public man, whether he be editor or legislator, who favors the abolition of all laws regulating the practice of medicine, is so far behind the trend of modern thought and present day advancement in conserving the healtn and lives of the people that it would seem unnecessary to direct any argument to him, as every state in the United States and all civilized countries require a license to practice medicine, such license being issued after some test of the applicant's fitness both mentally and morally. It is the duty of the state to protect the citizen from the charlatan and pretender, the ignorant and the unfit. Not only does this apply to the physician but to all the professions and some trades.

The physician's duty to the public is perhaps the most important from the fact that the lives and health of whole communities depend, frequently, on his being able to diagnose correctly many contagious and infectious diseases, such as typhoid fever. smallpox, diphtheria, scarlet fever, tuberculosis, cerebro-spinal meningitis, cholera, yellow fever, bubonic plague, etc., etc. old, worn-out argument that "a man's ills are his own" and he should be left free to employ whatever means he chooses, or no means at all, to relieve them, cannot hold good today. This argument might have held good fifty years ago, but in the light of modern discovery as to the etiology, or causation, of disease, we know that a vast majority of the diseases with which we are afflicted are communicable and preventable; so the state cannot afford to permit the individual to jeopardize the lives and health of the people as a whole. That individual, in many cases, would be unable to judge as to the competence of their medical adviser, should the state permit all who choose to practice medicine, we know by past experience. This is true in all the professions and many of the trades.

The average critic of medical laws seems to lay great stress on "school" or "system of practice." This bill has no reference whatever to school or so-called system of practice; it simply fixes a minimum requirement for all applicants that they should have a fair academic education, be of good moral character and have an elementary knowledge, at least, of anatomy, physiology, chemistry, bacteriology, etc., necessary to enable them to recognize disease and diagnose the same, regardless of school or system of practice; and, showing these qualifications, they may practice any means whatever in the treatment of their patients that they may choose, that being a matter between the practitioner and his patient, subject only to the laws bearing on malpractice with which this bill has nothing to do.

It is stated that this bill has been before both former sessions of the legislature since statehood and failed each time because of popular objection to it. This is a misstatement of facts, and if there is now a popular objection to this bill, it is on account of such misstatements from sources from which the people have a right to expect fairness and accuracy of statement. At the first session of the State Legislature a complete medical bill (not an amendment as the present bill) was passed by both houses and was vetced by the Governor after adjournment of the legislature; the Governor's reason for veto, as I now remember, being that he understood the bill to include midwives in its provisions, which was an oversight on the part of its framers, as it was never so intended. At the second session practically the same bill that is now before the legislature was passed by the Senate and did not get to a vote in the House. principally. I am informed, on account of the opposition of a certain religious sect whom it does not affect in the least, and does not change their standing under the law now in force. If they are affected by a medical law at all, the passage or rejection of Senator Doepn's obill will not affect their standing under the law.

The statement that the bill "would give

autocratic powers," that "midwives could be fined and imprisoned," that "druggists who administered a dose of 'Squibbs' to a citizen could be soaked or jugged, that the Board would have the right to say what is medicine and surgery and to set up a rule as to what is right and wrong in the practice of medicine and what a physician should and what he should not give his patients and punish by fine and imprisonment any who declined to agree with their views" seems so absurd as hardly to be worthy of a reply. It is difficult to imagine how any one with average intelligence could read the present medical law which has been practically the same in New Mexico for twentyfive years and then compare Senator Doepp's bill, which only amends three sections of the present law, and place such a construction as this on it. Yet a newspaper, published in the largest and one of the most progressive cities in the state, makes such statement.

Section one (1) of Senator Doepp's bill amends section two (2) of the present law which relates to time and place of regular meetings of the Board of Examiners, the amendment providing for only two regular meetings per year, whereas the present law provides for four, which experience has shown if often unnecessary and involves unnecessary expense.

Section two (2) of Senator Doepp's bill amends section three (3) of the present law. It is this section that makes the only important change in our present law. This change is designed solely to have the medical laws of New Mexico conform, to some extent, to the medical laws of other states of the Union. New Mexico is the only state in the Union that licenses physicians solely on a diploma from a medical school. Every other state long since adopted the requirement of evidence of preliminary education, good moral character and an examination by a state board, on the elementary branches at least, designed to discover the applicant's fitness to diagnose disease. The examination provided for in Doepp's bill is not rigid but the very least that could be made and conform to the requirements in all the other states. Under our present law the State Board of Health and Memical Examincrs MUST issue license without examination to all applicants holding a diploma from a certain class of medical schools: all others must not only hold a diploma from a reputable medical school but must undergo an examination more rigid than that provided in Senator Doepp's bill. The important and essential part of this bill is that it places all applicants on the same footing, requiring all to be examined unless the applicant holds a license issued after examination by a board in another state of equal requirements, which, if Senator Doepp's amendment is adopted, would include every state in the Union, as no state would then require less than New Mexico, whereas, now, New Mexico requires less to qualify to practice medicine than any other state. The passage of this bill would place us on a reciprocity basis with other states and a license issued by New Mexico would be recognized by almost every state in the Union. Under our present law no license issued by the Examining Board without examination, which comprises the great majority now issued, is recognized by a single state in the Union. Under the amendment to the law, as proposed, our state is placed on an equality with our sister states; without it those who fail in other states may come to New Mexico and register, thus making us the dumping ground for the charlatan, the uneducated and the unfit who fail in other states.

Section three (3) of the proposed bill amends section five (5) of the present law by providing for a penalty for failure to register license with county clerks. tion four (4) of the Doepp bill amends section six (6) of the present law relating to the refusal and revocation of licenses. The present law provides that the Code Ethics of the American Medical Association shall be the standard of professional conduct and license may be refused or revoked by the Board for a violation of this code. To show how unfounded is the assertion that "this bill is designed to increase the power or influence of the New Mexico Medical Society and the American Medical Association by legal enactment," this section of the amended bill repeals this reference to the Code of Ethics and defines clearly immoral, dishonorable and unprofessional conduct in the meaning of the law, and provides that license may be refused or revoked after due trial for immoral, dishonorable or unprofessional conduct and then defines such conduct, in the meaning of the law, to be habitual drunkenness, addiction to drug habits, production of criminal abortion or other acts involving moral turpitude. Do the people of New Mexico desire a lower standard for their medical advisers?

Section five (5) of the Doepp bill adds section twelve (12) to the present law, which provides for compensation of the members of the Board while in attendance on its meetings. The present law is not clear on this point.

Section six (6), the last section of the Doepp bill, adds section thirteen (13) to the old law simply repealing conflicting laws.

'I'ne statement that "this bill provides for an autocratic board consisting of members of the New Mexico Medical Society" is without any foundation whatever and shows a lack of information on the part of the writer. The proposed amendment does not amend, after or change in the least, section one (1) of the present law, and its passage or rejection would have absolutely no effect on the membership of the present board. Section one (1) of the present law provides for the appointment of a board by the Governor of seven members, and the only qualiheations required are that they shall be reputable physicians of known ability and have been legal practitioners and residents of the state for a period of five years. There is absolutely no reference whatever to "System or School of Medicine" or to membership in any medical organization.

The assertion that "midwives would be subject to punishment if this bill should become a law" is simply untrue, as our present law, in Section seven (7), specifically exempts midwives from the provisions of the act, and Senator Doepp's bill does not change or alter any of the provisions of Section seven (7) of the old law; neither does it change that part of section seven (7) which provides that "nothing in this act shall be construed to prohibit gratituitous services in case of emergency or the do-

mestic administration of family remedies;" so all the "stuff" about punishing druggists for giving a dose of "Squibbs" is without foundation, as is also the assertion that "we would be prevented from taking what we like for our own belly-ache." The statement that "the Board would be invested with powers to define what is medicine and surgery and dictate what kind of medicine and surgery a man may practice" is worse than the others, as there is not one word in the Doepp bill that can possibly be construed to even refer to this subject. Our law already defines this and the courts all over the United States have passed on that question. Drugless practitioners, such as osteopaths, are not affected by this bill, as they have a law and state board of their own which passes on the qualifications of such practitioners. Section seven (7) of our present law provides that "nothing in this act shall be construed so as to interfere with the practice of osteopathy, optometry or dentistry as provided by law" and the Doepp bill does not change of alter this in any respect.

Regarding "religious sects," "faith cures," "divine healers," "chriopractics" and the like, the passage or rejection of Senator Doepp's bill will not affect them in the least. The present law regarding such persons could not be made stronger and this bill does not touch the matter. Under our present law, such people when they attempt to treat the sick FOR GAIN without first obtaining a license either from the Medical or Osteopathic Board, are subject to punishment, not by the Board of Medical Examiners but by the courts of the state. If they go before one of the existing State Boards and show the elementary knowledge required to recognize disease, their method of treatment will not be questioned by the Board or the law, that being a matter solely between the practitioner and his patient, subject only to the laws pertaining to malpractice with which the medical law has nothing to do.

Every one of the foregoing statements are absolute facts, not mere assertions as are the statements of all the criticisms of the bill which I have seen. If any one doubts this, I only ask him to read carefully

the present law and compare it with the one proposed by Senator Doepp. The statements herein regarding the laws of other states can be proven to be facts by any one interested enough to investigate. Just ask any physician to loan you the latest edition of the National Medical Directory. In this you will find the laws of each state regulating the practice of medicine and surgery. You will also note that the requirements in this proposed bill are only elementary, and designated only to require an elementary knowledge of certain subjects necessary for any person before he attempts to deal with matters of life and death, not only of the person employing him but very often the whole community. If he possesses this elementary knowledge, the Medical Law or the Board has nothing to do with his "system of treatment." Under our system of government there can be no National Laws regulating the practice of medicine and this must be left to each state. Recent laws, both National and State, have placed grave responsibilities in the hands of licensed physicians in addition to those which have always devolved on them. refer to the recently enacted Harrison Narcotic Law seeking to eliminate the great evil of drug addiction, placing the distribution of morphine, cocaine, heroin and other habitforming drugs almost wholly at the discretion of legally qualified physicians. our laws prohibiting the sale of alcoholic in various communities gives, in most cases, the licensed physician the right to distribute them at his discretion; and yet we have some who pose as "creators of public opinion" sneer at the most elementary tests of fitness befor the state places the stamp of authority on a person by issuing a license to practice medicine.

Whether or not the bill introduced by Senator Doepp passes or fails will not materially affect the medical profession of New Mexico individually, but it will affect in many ways the good citizens of this state who have not taken the time or trouble to look into these matters and who, in many cases, have been misinformed. This has been written in the hope of enlightening the people of this state as to the true position of every honest and conscientious phys-

ician regarding medical laws, whether he be a member of a medical organization or not. As the newspapers are the chief source of such information for most of the people, and as I have not seen one criticism of the Doepp bill that touches one real provision of the bill, I could not let go unchallenged such glaring misstatements.

W. T. JOYNER, M. D.,
President New Mexico Medical Society.

Col. George E. Bushnell, Medical Corps, U. S. A., commandant of the United States General Hospital, Fort Bayard, New Mexico (the Army sanatorium for the tuberculous officers and enlisted men) was signally honored by the chamber of commerce, Silver City, New Mexico, Friday, February 26th, at a banquet given to him and the members of his staff.

Col. Bushnell has been in charge of Fort Bayard for the past eight years and during that time has converted this old frontier army post into the finest institution of its kind in the world. The government has expended over one million dollars in the construction of beautiful buildings, sewer and water systems and the plant stands as a monument to the efficiency and hard labor of this modest and unassuming officer.

Dr. Earl Sprague Bullock, medical director of the New Mexico Cottage Sanatorium, spoke of Col. Bushnell's medical work and his scientific achievements along the lines of tuberculosis.

Charlain W. K. Lloyd, U. S. A., told of the high regard in which the Colonel was held by the officers and men of the army.

Hon. Percy Wilson, mayor of Silver City, paid a glowing tribute to the old army surgeons who in the pioneer days were the only doctors in the frontier country; of the work of the medical corps of the army in discovering the cause of yellow fever and hookworm and for the sanitation of the Canal Zone which made possible the building of the Panama Canal. He brought the magnificent audience to its feet by his toast to Col. Bushnell as a "soldier, a man, a humanitarian and a scientist."

Col. Bushnell responded in a short speech in which he thanked the Chamber of Commerce for the honor they had conferred on him. He took it not so much as a tribute to his own worth, but to the medical corps of the army of which he was proud to be a member and to the medical profession of which he was still prouder to be a member."

Announcement has been made from the headquarters' office of the National Conference of Charities and Corrections of the preliminary program for its forty-second annual meeting at Baltimore, Maryland, May 12th to 19th. The conference will meet under the presidency of Mrs. John M. Glenn of New York, the second woman president it has ever had.

The program contains the names of over fifty leading charity workers and penologists, and it is anticipated the unprecedented social situation of the present year will result in a conference of unique values. The program on "The Family and the Community" will result in considerable discussion of methods of treating individual cases of poverty, as, for example, in a study of "The Psychology of Co-operation." Prof. Henry R. Seager of Columbia University will give an address on the

"Causes and Remedies of Unemployment."

The program of "Health" will be under the chairmanship of Dr. Richard C. Cabot, of Boston. It will include a series of discussions on the social responsibility of the hospital and practical methods of social work in connection with hospitals, the chief speaker being Dr. William H. Welch of Johns Hopkins Hospital, Baltimore. Other subjects will be: "A Pay Clinic for Persons of Moderate Means," "The Distinction Between 'Intensive Cases' and 'Short Service Cases' in Hospital Social Work,' 'and "Social Education of the Physician," the latter subject being treated by Dr. Charles P. Emerson. Dean of the Indiana University Medical School.

In previous years the National Conference has discussed the extent of scientific knowledge of the question of prostitution and the value of current methods of popular education. year, under the chairmanship of Mrs. Martha P. Falconer, superintendent of the State School for Girls at Darling, Pa., the question will be asked, "How shall the evil be suppressed?" The speakers on this subject include Dr. Katherine Bement Davis, commissioner of corrections of the City of New York, and Miss Maude E. Miner, secretary of the Probation and Protective Association of that city.

The discussion of state care of the insane, feeble-minded and epileptic will ocur under the chairmanship of Dr. Walter E. Fernald, superintendent of the Massachusetts School for Feeble-minded at Waverly. It will include answers to the question "What is Practicable in the Way of Preven-

tion of Mental Defect and Disease?" and the discussion of "Available Fields of Prevention of Mental Defect and Disease" and a discussion of "Available Fields for Research and Prevention in Mental Defect." The speakers in this section include Dr. Adolf Heyer of Baltimore, Dr. C. B. Davenport, Cold Spring Harbor, N. Y., Dr. H. H. Goddard of Vineland, N. J., Dr. Martin W Barr, superintendent of the Pennsylvania School for the Feebleminded at Elwyn, and Dr. Walter S. Cornell of Philadelphia.

Other divisions of the program are upon children, corrections, education for social work, the family and the community, public and private charities, and social legislation.

The following licenses were granted by the Medical Board at its last meeting, January 11th:

Upon Credentials:

Dr. Ira Ollisom, St. Louis College, P. and S.—1903.

Dr. Thomas J. Cummins, Baltimore Colloge, P. and S.—1903.

Dr. William B. Morraw, Jefferson Medical College,—1891.

Dr. William J. Smith, Medical Department University Ark.—1888.

Dr. Harriet R. Flanders, Tuft's Medical College.—

Dr. Erastus S. Darling, Indiana Medical College.—1903.

Dr. Frank D. Green, Kentucky School of Medicine.—1888.

Dr. Charles A. Pearson, Kentucky School of Medicine.—1898.

Dr. Albert K. Porter, Columbia College, P. and S., New York.—1889.

Dr. Frederick J. Nordby, University Colo. Medical Dept.—1913.

Dr. J. R. Van Atta, University of Kansas Medical Department.—1910.

Dr. William B. Boal, Sterling Medical Medical College.—1901.

Dr. Wallace W. Dill, University of Pennsylvania Medical Dept.—1900.

Upon Examination:

Dr. Walter E. Whitfield, South Western University Medical College.—1911.

W. E. KASER, M. D., Secretary.

Original Articles

CETONEMIA WITH REPORT OF A CASE.

F. W. Noble, M. D.

Surgeon to Tucumcari Hospital.
Surgeon to Mountain States Telephone
and Telegraph Co.

Div. Surgeon to E. P. & S. W. System.

Former Chief Surgeon Oklahoma Methodist Hospital.

Read before the Thirty-third Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., Oct. 5, 6, 7th, 1914.

Anything new, either for or against the accepted treatment of a complication, about which little has appeared in our text books and very little has been written in our journals, commands our earnest attention.

Acetonemia is an acute toxemia, resulting from acetone diaetic acid or both in the blood and characterized, by acetonuria or diaceturia, a distaste for food, vomiting, which becomes persist-

ent and pernicious, often fruity odor of acetone to the breath, restlessness to convulsions and finally coma, weak rapid pulse and, in severe cases, collapse and death.

Acetone was first discovered by Peters, in 1857, in diabetes. Muller found small amounts in normal individuals and that it was increased by starvation and by narcosis.

The source of acetone is beta-oxybutyric acid, by oxidation into diacetic acid and further into acetone. These bodies are collectively called the acetone bodies. Normally the acetone bodies are oxidized into C₂O and H₂O in the body and, only traces, if any, of acetone are found in the urine. It is only under abnormal conditions that they leave the body unoxidized. This abnormal condition may be hunger, during a salt free diet, during some fevers, (it is said that scarlet fever and diphtheria may be distinguished from ordinary sore throat by the absence of acetone in the latter), it is often present in extra-uterine pregnancy and its presence is said to be confirmatory, without being absolute. It is present in some cases of carcinoma and after anesthesia, especially following chloroform anesthesia. Formerly it was held that these bodies were formed within the intestinal canal. But now little credence is given this as a source. Acetonuria has been observed during pregnancy as the cause of nausea, vomiting (often pernicious), severe headache, dizziness and eclampsia. B. M. Rhamy showed the urine to contain acetone in every case and diacetic acid in 20 rer cent of the cases. He considered the test for acetone to be more important than that for albumin, during the course of pregnancy.

Recent thought places the production of these acetone bodies as during intermediary metabolism within body. It is evident that one important cause of their formation is a diminution of the carbo-hydrate metabolism with increased destruction of fats, for this condition is apt to occur during fasting, and it has been shown that the administration of fats, especially fatty acids by mouth, increases their elimination. Many favor the view that these acetone bodies are all derived from the breaking down of fat within the body. But owing to our ignorance as to the relation existing between carbo-hydrates, fats and non-nitrogenous cleavage products of proteids, it seems beyond us to establish our final verdict now.

Predisposing to this toxemia are: Starvation, diabetes, insufficient carbohydrates ingested, chronic diseases of the liver and kidneys, exhausting hemorrhages, wasting diseases, sepsis and lowered general vitality.

The direct cause, to which I wish to call attention, is narcosis by chloroform or ether. In dogs, chloroforming for one hour, causes necrosis of the liver; and intense fatty change in the liver, when given for a shorter time. K. Reicher has shown that the important liquids and fats are expelled by the cells, under the influence of the anesthetic. In children the symptoms are those of acidosis, without jaundice and the liver shows fatty degeneration about the periphery of the lobules. In young adults the pathological picture is different and consists of intense jaundice, hemorrhage and the symptom complex of a rapidly fatal case of acute yellow atrophy. The liver is reduced in size, yellow and flabby and shows an extreme degree of necrosis, beginning in the center of the lobules, with more or less fatty degeneration in the periphery. Besides these there are cases that grade in between the two. The nature of the operation seems to have no bearing on the trouble.

Anesthetization by chloroform is decidedly more apt to be followed by this complication than narcosis by ether. Subjects under fifteen years of age are more apt to suffer than those older.

After 681 anesthesias at the Children's Hospital in Boston, 662 had acetonemia, and of these 60 showed marked toxemia and of these 16 died from the intoxication.

It has long been common knowledge that after chloroform anesthesia, some cases showed marked toxemia, evidenced by prolonged and pernicious vomiting, which came on in greatest severity two to five days after the operation and to this condition was given the name delayed chloroform poisoning. In these cases there seemed to be nothing found at autopsy; but general infiltration of the heart, kidneys, voluntary muscles and liver. noting the condition of the liver, this was known as acute fatty degeneration of the liver due to chloroform. Recent studies of these cases of delayed chloroform poisoning, show an excess af acetone in the urine and it is now known that these symptoms are due to the acidosis.

J. A. Kelly published 400 operative cases, of which 46 showed acetonuria and the symptoms of the intoxication. Tattleford and Falconer reported three fatal cases after chloroform anesthesia. Brewer reported one fatal case and I know that one of Dr. Achilles Davis'

patients died with it this year, in Wesley Hospital, Chicago, while I was visiting there. Brackett, Stone & Low reported three cases after chloroform and McArthur reported one fatality. Bevan and Favill collected, from literature, 29 undoubtedcases in addition to one of their own and of this number 28 died. They called attention to the liver as the probable cause of the toxemia and also to the similar changes occurring in this condition and acute yellow atrophy.

The source of the acetone bodies and their place of formation is therefore in the liver. Their presence will depend upon the absence of the carbo-hydrates and the too active mobilization of the stored fat or too little activity of the liver in producing the ordinary changes in the fat, will result in the accumulation of the unfinished product in the liver. A fatty liver is the result, and implies a defective metabolism and oxidation, with general breakdown of all the hepatic functions and fatty acid intoxication, which, in bad cases, goes on to acute yellow atrophy. In mild cases, at the end of the second to the fifth day following anesthesia, a patient, previously doing well except for a distaste for food, begins to vomit and become restless. In serious cases. vomiting becomes persistent and incessant, with constant nausea, often a fruity odor of acetone on the breath. constipation, temperature being raised but little, if any, pulse becoming faster and weaker, with cold, clammy skin and perhaps some jaundice. The patient looks extremely ill, becomes very restless with stupor later, from which he rouses to vomit. Still later comes extreme dyspnoea, cyanisos, ChevneStokes' breathing. The temperature rises and the patient slips away.

The diagnosis is made by the recurrence of the vomiting, the rising pulse, the presence of acetone or diacetic acid in the urine and the exclusion of other complications, such as: hemorrhage, infection and ileus. The cardinal signs are: nausea two or more days after the operation, increased pulse rate, the restless state and the presence of acetone or diacetic acid in the urine.

The outlook is usually good, if the cause of the trouble is found and treatment begun early before collapse commences.

The best test for acetone is Lugol's. This consists of 10 grammes of glacial acetic acid, mixed with 10 c. c. of a 1 to 10 solution of sodium nitro-prusside and add 20 drops of this reagent to 15 c. c. of filtered urine and overlay the mixture with ammonia water. With this test, even as low a dilution of acetone as 1 to 2000, will show a purple ring at the junction of the mixture with the ammonia.

For diacetic acid, the test is made by diluting the filtered urine with four parts of water and to this dilution we add, drop by drop, a 1 to 10 solution of ferric chloride. In normal urine the resulting precipitate will be white; but in that containing the diacetic acid the resulting precipitate is a purplish black cloud.

I have had four rather severe cases. The following case history may appeal to you:

Mrs. Blank, housewife, aged 37, complains that everything eaten comes up, a mouthful at a time, without nausea, that her abdomen bloats and that there is deep burning pain at all times,

in the epigastrium, since she suffered from enteric fever five years ago. This trouble is better in winter and worse in summer. She is well nourished and is not losing weight. Her father was killed and her grandfather died from consumption. She lived in the same house with her grandfather, for four weeks, while he was ill with tuberculosis. Her mother has had delicate health all her life; but is stronger now. The appetite is good and she chews her food well; but the molar teeth are poor. She has no more distress after meals, than at other times; but thinks the pain is eased by eating. She has had no sour belching and has never vomited blood nor had the characteristic stools from gastric or intestinal hemorrhage. She is constipated and formerly had severe pain in the rectum, when the bowels moved. which lasted about one hour after the movement. She has suffered from hemorrhoids occasionally and has pain in the sacral region, which has been increased at such times as the hemorrhoids gave trouble. She drinks very little water and only two cups of coffee and these only at breakfast. Micturition, at times, occurs every few minutes and at other times only twice during the day. The quantity passed varies greatly, from large quantities, to very little. There is nocturia to the extent of one to four times; but there never has been blood, calculi or matter passed; although the urine has been milky at times. She has no cough at present: although she had continuous cough before coming to this locality and coughed up blood once or twice. She never had night sweats; but at that time was losing weight. She had malaria before coming here, also pertussis, rubella, varicella and scarlatina. She has had tonsilitis all her life, at intervals, and has had both pneumonia and enteric fever. She had severe colic in both lower quadrants as a child and had bilious attacks, when a child.

She has pain now in the left hypochondrium, which is relieved by belching. Her stools vary in color from light to dark and she has sinking spells but during these spells she can tell what is going on around her, and at these times her hands cramp. Such attacks are brought on by excitement. She has slept well all night until recently, when she has only cat-naps. She has squamous eczema on the neck and in the flexures of the arms and legs. Her hands feel as though they swelled some in the mornings. Headache is not a usual complaint, although she does suffer from terrific one-sided headaches at times. These come in the eves and extend over the head and neck and are usually left sided. Her eves blur, when she does not use her glasses, and she has dark sparks in front of the eyes. Her menstruation commenced at 17 years and was irregular. She has cramping pain across the lower abdomen and in the lower part of the back at the menstrual periods and the periods last from 4 to 10 days. She says she has no leucorrhoea. She has had one child, one year after marriage and was lacerated at this birth but was repaired. the last six weeks of her gestation, she had severe vomiting, and says that she suffered severely from after-pains, which continued for a long time. This shows puerperal infection. She feels weak at the menstrual periods, has had no miscarriages; although she flowed for 10 weeks last summer. There is no bad odor to the menstrual flow.

She has a systolic mitral murmur and the second aortic sound seems to be accentuated. Tenderness can be elicited over the gall bladder area and there is considerable tenderness over McBurney's point. On inflating the stomach, its lower border is two inches below the umbilicus. An examination of the rectum, shows internal hemorrhoids and a vaginal examination shows a lacerated cervix, the uterus is larger than normal and badly retroverted.

A catheter specimen of the urine, contained neither albumen, sugar nor casts; but did contain an abundance of pus cells.

The feces were negative to the benzidin test,

The patient consented to operation and I dilated the uterus, curetted it, swabbed out with iodine and carbolic and repaired the cervix. The rectum was thoroughly dilated, and next we made a low median abdominal incision. through which I removed a large distorted right ovary with micro-cystic degeneration and opened up cysts of the left ovary and wiped out the lining membrane with a piece of gauze. The appendix, which was adherent, clubbed and curled upon itself, was removed and a band, from the ileum, causing a Lane's kink, was divided and the ileum freed. Then a ventro-suspension of the uterus was done, the abdomen closed and the stomach washed. Her pulse before the operation was 84, Resp. 20, Temp. normal, and at 4:15 in the afternoon, the day of operation, the temperature was 98.6, pulse 88, and at 6:20 the next morning she had a

temperature of 99.2 with a pulse of 88. She had been nauseated and had vomited light green liquid, at intervals, since the afternoon of the previous day and at 10 a. m. a specimen of her urine was examined, because her pulse had gone up to a hundred with a temperature of 98.8, with no evidence of sepsis or hemorrhage. The analysis, made for both diacetic acid and acetone was positive, the acetone test giving an especially beautiful reaction.

The diagnosis now was acetonemia following ether anesthesia. Treatment was started, consisting of one scruple of sod. bicarb. by mouth, which was immediately vomited. We omitted further treatment by mouth and gave a solution of sod, bicarb, 4 per cent and sugar of milk 1 per cent, by the Murphy drip; but she proved unable to retain any of it, after repeated trials. Her pulse at 2 p. m. had gone up to 120, with a temperature of 99.5 and she was more nauseated and looked very ill. At 5:30 on the morning of the third day, her temperature was 99.2 and her pulse 104. She still continued to look bad and was intensely nauseated, with a sweet taste in the mouth and vomiting green fluid, and at 12:20 her temperature was 99.2 and her pulse 128, and at 2 p. m. her temperature was 99.4 and her pulse 120. A pint of strong sodium bicarb. sol. was given, as an enema, to be retained; but this was expelled; so that at 9:30 p. m. I gave 1 pt. of sod. bicarb. sol., 6 drams to the pint below the right breast. The skin was sterilized by one-half strength Tr. Iodi and the sol. started. A large blister started to form immediately in the skin as I injected the fluid and the lower part of the breast assumed a strawberry hue. This formed in time

a large slough of the lower half of the breast, without infection or pus formation, and the wound has since healed by granulation.

At 6:20 the next morning after the injection. I saw the patient and there had been no vomiting after the injection and the patient's temperature was 98, pulse 114, Resp. 24 and at 11:30 the temperature was 98, pulse 104, Resp. 20, and by that time she had had and retained three feedings by mouth of malted milk. This was used as the most convenient method of making up for the lack of carbo-hydrates. The temperature now continued normal and the pulse continued to get slower each day. There was never any vomiting after the injection of the soda and the nausea was absent within 6 hours.

Crandon in his book on surgical after-treatment advises the use of a 6 drams to the pint solution of sod. bicarb., under the breast or into the veins, in severe cases; but says it sometimes causes abscesses. It did not cause an abscess in my case, but a dry gangrene. I am satisfied that this strong solution caused the gangrene and that it should not be used, either subcutaneously or intra-venously, in strength advised. In passing it is interesting to note, that she had a history of vomiting, during an attack of enteric, for 10 days, and had also vomited severely after a five minute chloroform anesthesia for several days. Her breasts were rather flat and she complained of feeling much pressure during the injection of the breast. She had eaten very little, so she said, before the operation, for about four days.

Of four cases I have had of severe acetonemia, three of which followed anaesthesia, all have recovered.

BIBLIOGRAPHY.

Joslin.
Stadelmann.
A. H. Taylor.
Lehman.
Muller.
R. Wilbur..
J. G. Sharpe.
Crandon.
A. R. Edwards.
Krehl.

SARCOMA OF KIDNEY.

S. W. Swope, M. D. Deming, N. M.

Read before the Thirty-third Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., Oct. 5, 6, 7th, 1914.

Sarcomata Flesh tumors are essentially malignant in character.

Sarcomata are malignant connective tissue neoplasms,

Virchow is responsible for the rehabilitation of the term and for its modern significance. He defined sarcomata as new formations of connective tissue type, distinguishable from corresponding fully developed tissues by their immaturity, of which the predominance of their cellular elements is a sign.

Sarcoma of the kidney is a disease of early life. Walker reported one hundred and thirty-eight cases of renal sarcoma of early life, one hundred and fourteen of the patients being under five years of age.

Sarcomas themselves are not especially common. Of fifteen thousand, five hundred tumors of various regions, only 9.4 per cent were sarcomatous; while 54.4 per cent were carcinomas. The frequency of tumors of the kidney, with reference to their character occur in the following order: hypernephroma, carcinomata, sarcomata. Malignant growths of the kidnev are rare. Ebstein found three cases of carcinoma of the kidney in a tabulated series of eight thousand three hundred cases of carcinoma of all regions. Fifty per cent of all cases of sarcoma of the kidney occur in children under ten years of age. Jacoby has demonstrated the presence of the disease in a foetal kidney. Sarcoma of the kidney is usually unilateral but is sometimes bilateral. Crumpell reported two brothers dying of sarcoma of the kidney in early infancy.

Sarcoma of the kidney may originate in either the body, pelvic wall, or capsule of the kidney. It has developed in the superrenal.

Microscopically sarcoma is a yellowish white mass with sometimes varicolored areas. There may be cysts and nodules of apparent subdivisions. It is soft and incapsulated. Microscopically it is composed of round or spindle cells or both; connective tissue and sometimes muscle fibres as sequestrations. In advanced cases haemorrhathgic infracts and breaking down areas will be found.

The symptoms of carcinoma of the kidney are insignificant in comparison to the gravity of the disease. Pain especially in children is slight. The first and frequently the only symptom will be the presence of a tumor and the con-

sequent disturbance from the pressure on surrounding tissues. In children the presence of a small tumor excites little attention. In malarial districts it is often considered an "Ague cake" enlargement of the spleen, or hepatic disturbance and little attention is paid to the growth until its unusual size attracts attention, or a cachexia is developed. Cough from pressure on diaphragm may develop. Gastric disturbance from pressure and digestive and aliminative disturbance from metastasis in mesenteric glands. Anxious face and emaciation of extremities mark the latter course of the disease.

The diagnosis of sarcoma of the kidney from other solid tumors of the kidney and superrenals is practically impossible without exploratory incision. Practically all of these growths present a rounded outline. In young children we seldom see the growths until they fill up the natural hollow of the loin and extend in an anterior direction to the median line. The large intestine lies in front of the tumor and may produce gurgling on pressure. The finger tips cannot be passed between the tumor and the spinal column.

Conditions which are apt to be confounded with tumor of the kidney, are enlargement of the spleen, aneurism of the renal artery and hydronephrosis on the left side. Tumors of the liver, gall bladder and colon, in addition, on the right side.

The differential diagnosis of sarcoma from carcinoma and hypernephroma are usually made on the operating table or in the pathological laboratory.

About seventy per cent of carcinomata of the kidney are accompanied by hematuria and a small per cent of sar-

coma and hypernephroma are accompanied by this symptom. Carcinomata are more frequently accompanied by pain, more apt to occur in adult life rather than childhood; are apt to develop slowly and are accompanied by earlier cachexia.

The prognosis of sarcoma of the kidney is very grave. Fifteen years ago ninety per cent of the cases that recovered from the initial operation died within a short time; while fifty per cent of the operations proved fatal at the time of operation. Recent statistics make the mortality of the primary operation not more than five per cent and the mortality after operation about thirty per cent before the end of the third year. When we take into consideration the fact that sarcomata are surrounded by a zone of latent infection extending far beyond the obvious limits of the tumor, it is easy to see why a rapid return of the growth is the rule, when operative procedure is delayed beyond the early stage of the disease.

The improved statistics of modern operations is due in part to the improved technique, but more to the earlier recognition of the condition and the earlier operation of the cases, before metastasis and extension has taken place. We must take into consideration the fact that few of these cases that are not operated survive six months after the discovery of the disease and almost none survive one year.

There is but one treatment at present for sarcoma of the kidney; extirpation as early as the disease is discovered. Applications of electricity in various forms and other extemporizing agents, are of no avail beyond delaying operative procedure, thereby lessening the chances of ultimate cure.

REPORT OF CASE.

J. C., eleven months and twenty days old, was brought to me January third, 1914. Parents healthy ranch people with negative family history. Has two sisters and one brother older, all in good health. Patient has never been sick. He had a fall from bed when about six months old, when he cried for some time but seemed all right the following morning. Early in August, 1913, mother noticed fullness in left flank which by the middle of October developed into a hard mass seemingly about two inches in diameter. Child was so robust and not having any other symptoms, no physician was consulted. This mass grew steadily until January first, 1914, when on account of size of tumor the parents became anxious and brought the child to me for advice. Subject was finely developed male specimen, blonde, weighing twentyseven pounds, nursing mother.

The tumor in left flank was hard. It was apparently about four inches in transverse diameter, by about six inches in longitudinal diameter. It extended from the lower border of the ribs on the right side to below the crest of the ilium, filling the left flank to slightly beyond the median line. The growth was apparently irregular in shape, without pain on deep pressure and could be slightly separated from the lower border of the ribs.

Fluroscope showed a distinct shadow over tumor area with fairly well marked small shadow above. This small shadow proved to be the spleen. Urine chemically, macroscopically and microscopically normal. The quantity of urine was not determinable. Systolic blood pressure 115, haemoglobin

85, digestion good, bowels regular, sleeps normally.

Diagnosis, tumor of the abdomen, either sarcoma of kidney or some splenic involvement with conclusions leaning toward the latter condition.

Operation was advised at once and accepted. Operation was performed in Ladies' Hospital at Deming, January 5, 1914, assisted by Drs. Steed, Paine and Vickers; ether anaesthesia. An incision was made from lower border of ribs to crest of illium. The peritoneal fluid seemed normal. A large mass presented showing an escapsulated tumor, at once recognized as sarcoma of the kidney. The growth was closely adherent to the surrounding tissues forming the bed. The adhesions were easily broken down with the fingers, the separation causing considerable hemorrhage. The adhesions were all separated and the tumor delivered from the opening. The pedicle containing enlarged renal vessels and normal patulous ureter, was ligated and the tumor removed. Time eighteen minutes. The bed of the tumor was carefully inspected, no bleeding points were found except some small oozing from the torn adhesions. A stab wound was made in lower flank for drainage, drainage placed and posterior peritoneum closed with No. 1 plain catgut. Inspection of abdomen showed normal stomach, appendix, right kidney, gall bladder, liver and spleen. Metastasis was found throughout the mesenteric glands especially marked at splenic and hepatic flexure of colon.

The anterior peritoneum was closed with No. 2 plain catgut, muscle and fascia with same. Skin was sutured with silk and silkworm stay sutures placed. Patient was put to bed in very

good condition in one hour and fifteen minutes after beginning the anaesthetic.

The recovery was uneventful. Child took the breast six hours after operation, nursing every four hours thereafter. Drainage was fairly abundant, gauze drain being removed on third day. The skin sutures were removed on the tenth day. The child returned to his home on fifteenth day weighing at this time twenty-four pounds.

Prognosis: Probable recurrence within three months, with probable death within one year. I advised use of X-ray over abdomen with little or no encouragement as to final results.

The tumor (Fig. 1) was four and a half by six inches in diameter, greyish pink in appearance, slightly lobulated, encapsulated and weighed three and one half pounds. Microscopical sections showed mixed sarcoma with round and spindle cells. Fig. 2 illustrates section of tumor through centre.

On February fifth the patient was in splendid condition, weight twenty-six pounds. Began use of X-ray, five minute exposure once a week and continued use of agent until May, when regrowth of tumor had reached such proportions that further use of agent was plainly of no value. Abdomen was then again opened and the tumor was found occupying the old bed with several distinct small growths in the surrounding tissues. One of these weighing about one gram, was located in the cellular tissue, under the skin near the point of first incision and probably was a transplant from a rupture of the capsule of the original tumor at the time of the first operation. The stomach, liver, gall bladder, pancreas and appendix apparently normal. The mesenteric me-



tastasis was somewhat increased from former observation and colon elongated. I decided that further operative procedure was contraindicated. The wound was closed without drainage; recovery uneventful. Fig. 3 represents child after second. operation and at time neo-salvarsans was begun.

On a recent visit to Chicago I had the pleasure of visiting Murphy's clir. and while there I heard him give a very impressive description of his success with salvarsan and neo-salvarsan, on sarcoma of bone. I suggested the use of this agent without giving any encouragement as to the ultimate results and we gave 0.15 neo-salvarsan intra muscularly, May 19, 28 and June 11. After each dose of the neosalvarsan there seemed to be an appreciable improvement in the general symptoms for a short time, but no appreciable influence on the growth.

The child died of asthenia August 12, age one year and seven months; thirteen months after the growth was discovered and seven months after its removal.

Autopsy six hours after death. Rigor mortis absent. Great distention of abdomen, extremities emaciated. (Figure 4). Large quantity of light straw colored fluid escaped from abdomen on incision. The abdomen was filled with a large sarcomatous mass weighing about eight pounds, growing from surface of bed of former tumor, with intricate and decided 'attachments to surrounding tissues. The colon lav above and around growth, apparently little affected by pressure (Figure 5). Stomach somewhat enlarged, other organs normal; metastisis throughout mesenteric system. The blood was pale and scant.

Conclusions.

There is little new to tell of sarcoma of the kidney. The only hopeful treatment is early nephrectomy with great care in removing on account of possible transplantation. The posterior route is preferable if possible. Removal of advanced growths possibly retards ultimate results. X-ray and neosalvarsans had no appreciable effect on my case. The abdomen can be opened and inspected under modern conditions, with little inconvenience to the patient.

A FEW ANATOMICAL, CLINICAL AND SURGICAL CONSIDER-ATIONS OF THE TONSIL.

Report on 207 Operations.

James J. Pattee, M. D. Pueblo, Colorado.

Read before the Thirty-third Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., Oct. 5, 6, 7th, 1914.

The tonsils are olive shaped masses of lymphoid tissue occupying the recesses called the tonsillar fossae, bounded posteriorly by the palatopharyngeus muscle and anteriorly by the palatoglossus muscle, known as the posterior and anterior pillars respectively. A capsule of dense connective tissue 1 mm. thick surrounds the gland except on its medial side where from one-fifth to one-third of the surface area is covered with stratified mucosa. A variable area of this surface is overlaid with the plica triangularis, a prolongation of the capsule backward beyond

the anterior pillar. The tonsil is the most complex lymphoid structure in the body. Connective tissue trabeculae divide it into lobes. A number of crypts varying from eight to fifteen penetrate the tonsil extending deep through its substance to the capsule. The lower crypts lie horizontally, while the upper ones, originating in the supra tonsillar fossa, usually have a downward direction. As the crypts pass into the tonsil their lining walls lose the stratified epithelium found in the oral surface. The underlying membrane, intended by nature as a barrier to infection, is absent. The gate is open, so to speak, for infection to directly enter the gland, through the lacunae. All the histological barriers along the crypts may be destroyed by an attack of follicular tonsilitis that would scarcely impair the surface of the tonsil, which has ample stratified epithelium and underlying barriers. This histological feature of the crypts teaches three valuable lessons: (1) That a tonsil may be ever so diseased but appear nearly normal. (2) That the tonsil is a dangerous portal of infection. (3) Why certain cases have chronic tonsilitis.

There are four anatomical conditions of the tonsil pillars which are of special importance.

- (1) If they approach each other too closely, they hug over and cover the crypts and prevent expulsion of the contents which favor infection and toxic absorption.
- (2) The pillars join above to form a recess over the tonsil which extends upward toward the palate and downward into the neck. It is a veritable catch basin into which the upper crypts drain. This is the source of most quinsy and cervical adenitis.

- (3) Injuries of pillars in operations cause most hemorrhages.
- (4) The perfect voice requires ideal pillars, therefore reduce injury as much as possible.

The pillars have a rich blood supply, consequently minimize hemorrhage by minimizing dissection. They are important according to the extent they bury the tonsil. A large naked tonsil is often preferable to a small buried one. A submerged tonsil, like a submarine boat, is capable of great mischief.

PHYSIOLOGY.

The exact physiological functions of the tonsil have not been determined, therefore the last word concerning treatment cannot be said. However, up to this time, no evil effects have followed the removal of tonsils, whereas the evidence upon every hand to show the benefits resulting from complete removal of tonsils has accumulated as the work has progressed, until today it is overwhelming. Experienced landlords regard an empty house better than a bad tenant. Likewise, an empty fossa is to be preferred to one filled with a diseased tonsil.

BLOOD SUPPLY.

The tonsil blood supply is of surgical interest. The lower one-third of the tonsil contains the entrance of all the arteries, except the small palatina descendens which enters above. The supply being least along the anterior and upper part of the tonsil, dissection should begin along the margin of the anterior pillar and continue upward over the top baring the heading of the tonsil which by traction with the forceps is drawn to the opposite side. By this course we are able to do about three-fifths of all our dissection without

much hemorrhage. We snare or dissect the lower portion last and of course have most hemorrhage then and from that location.

The ideal operation is one in which the operator dissects just outside of but close as possible to the capsule, for here the arterial twigs are finest and hence hemorrhage is least; also the injury to the pillars and veins external to the tonsil is thus minimized. If the incision extends through the capsule into the parenchyma, the operation is more difficult and the hemorrhage more troublesome. If there is hemorrhage from a solitary vessel that persists five to ten minutes after firm compression, apply a Should this fail the veshaemostat. sel should be ligated. If there is a gradual persistent oozing, I place a firm compression sponge powdered with alum into the recess and suture the pillars together over it. This packing is removed twelve to twenty-four hours later. I have found this easily done and very dependable. For this I use a long handled needle holder and as large a needle as possible because if by accident I break a needle the ends can be found and removed much quicker. If suturing a compress into the fossa fails, ligate the external carotid.

From my conversation with physicians, I believe many of them think operative hemorrhages are due to entering the internal carotid. The four small arteries entering the tonsil at its base are the cause of the bleeding. The internal carotid is 1.5 cm. distant from the field of operation with connective tissue and the superior constrictor as barriers guarding against accident, clumsiness and ignorance in operating. On account of unwarranted fear of hemorrhage, too many diseased tonsils

have been allowed to remain in the throat of individuals, especially adults, causing not only local disturbance and peritonsillar abscess, but secondary regional infections and general toxemia. Likewise, on account of this fear, cases are often improperly managed by local applications, or the tonsils are incompletely removed, leaving remnants which inflame and furnish portals of infection for quinsy, cervical adenitis, arthritis, tuberculosis, etc.

LYMPH SUPPLY.

The lymph from the tonsil drains first into the superficial glands of the neck and then into the deep. The superficial gland at the angle of the jaw is usually the first enlarged in adenitis. In every case of lymph adenitis the tonsils should be carefully examined and the teeth examined for pyorrhea alveolaris.

PATHOLOGY.

Large surfaces in the protected areas of the fissures and crypts of buried tonsils afford ideal conditions for bacterial growth. These conditions favor the dissemination of bacteria through the blood vessels and lymph channels; they lower resistance by altering the chemistry of digestion and even cause bacteremia.

In studying chronic focal infection as a causative factor in chronic arthitis, Billings (Journal A. M. A., Sept. 13, 1913) found that the focal disease was usually located in the head. Most frequently this was a chronic streptococcus of the faucial tonsils but chronic alveolar abscess or chronic sinusitis due to streptococcus infection was an occasional cause.

In a study of chronic streptococcus arthritis, generally known as rheumatism, D. J. Davis (Journal A. M. A., Sept. 6, 1913) found in the investigation of forty-two cases that the portal of infection was diseased tonsils. In forty the tonsils were removed and cultures made. In thirty-eight the streptococcus was grown.

Some of the important findings in his work were as follows: "The tonsils in these cases were often small and submerged. On slight pressure, there was a purulent exudate from the crypts. There was nothing in the appearance of the tonsils to make one suspect a pathological condition. An acute tonsilitis often ushered in the arthritis. Enucleation of the tonsil leads commonly to improvement or complete relief. A streptococcus is found in nearly all cases. This streptococcus innoculated into animals produces arthritis. That autogenous vaccines are of unquestionable therapeutic value in the treatment of arthritis "

PORTALS OF INFECTION.

Exhaustive study of this subject followed the well known experiments of Dr. Wood in which he showed conclusively that tubercle can be absorbed into the tonsils. About six per cent of tonsils, as they run, are tuberculous. Cervical glands may become tuberculous through a tonsil without the latter becoming infected. The close relationship between diseased cervical glands and pathological tonsils have been evident from numerous standpoints but none are more conclusive, after all. than the cure of the former by removal of the latter. Only a few years ago, surgeons prided themselves on the removal of large chains of cervical glands. They never dreamed of referring to the tonsils. Recurrences were very frequent. Today these cases have their tonsils removed and, with rare exception, very soon recover.

To the surgeon, permit me to say you will get the best result in the shortest time and with the least risk if, after operations on the neck, you will completely enucleate the tonsils. In many of these cases I believe if the order was reversed and the tonsils first removed that operations upon the neck would be unnecessary.

INDICATIONS FOR REMOVAL.

These are: 1. Local. 2. Systemic. Local conditions are the hypertrophied tonsil which, on account of size, mechanically obstructs breathing and thus produces disordered nutrition, faulty development of the face and impaired hearing. Such a tonsil may require enucleation on account of size alone. Such cases are rare. In fact, altogether too much stress has been placed upon size and too little upon infection. There have been too many large tonsils removed; too many small ones overlooked. In the child from six to fourteen years of age there is a physiological enlargement of the tonsil. At this age a comparative large tonsil should not be removed, except for three reasons: (1) Size alone—when it is a positive mechanical menace. (2) Repeated local inflammation. (3) Systemic infection.

Every tonsil that has been affected with quinsy should be enucleated. Patients with cervical adenitis, especially those cases that have had tonsilitis or rheumatism, should be operated.

In a child, whose general condition is below par, flesh flabby, appetite bad, skin pale, tongue coated, stool abnormal, breath foul and the mucosa pale, a careful examination will generally reveal a diseased tonsil which has caused

the condition by local infection, impaired gastric chemistry and absorption of toxines. The improved health and cure after complete enucleation will. I believe, convince any open minded physician that the tonsil is the cause of the symptom complex. At any rate, the laity is convinced, for frequently I have had them get a second and third child operated after they have seen the result of the first. Partial removal of the diseased tonsil, like partial removal of the diseased appendix, will very often fail and naturally, often increases the trouble because of the scars of the trabeculae and pillars which hinder drainage of the crypts.

My series of 207 operations covers about three years. I have specialized eight years. I do not know how many operations there were the first five years, but think about 250, making a total of 450 cases in eight years. Of the 207 cases, there were 97 males and 110 females. The ages ranged from an eleven months boy, the youngest, to a woman of 58 years, the oldest. About seventy per cent of the cases were done at the hospital; the remainder in private Although the minority has been performed at the homes which have been prepared, arranged and furnished for the occasion according to written instructions furnished, I regard tonsillectomy a hospital operation.

During eight years I have had one death, one bad case of hemorrhage at the time of operation, two cases of very slow but persistent oozing, two cases of secondary hemorrhage of very moderate severity, and two cases that nearly succumbed to chloroform narcosis.

The fatal case was male, four years of age, tonsils and adenoids moderately enlarged, nasal chamber small, mouth breather, subject to frequent earache.

Otherwise healthy. Tonsillectomy under ether at residence at 1 p. m. Had a competent anaesthetist and a nurse to care for the case. Immediately after the operation there was no hemorrhage and the nurse says there was none at any time. At 4 p. m. and at 7 p. m. the nurse phoned me that there was no bleeding, vomiting, special thirst or nervousness. At 2 a. m. she phoned me that the child seemed weak, but still she thought his condition was not alarming. At 4 a. m. I found the child dead. Autopsy declined. I think death was due to status lymphaticus but it may have been due to the anaesthetic or hemorrhage though the nurse is very certain that it was not due to the latter. Just here, if you will pardon the reference, will say that two years later I operated the brother of this case for about the same conditions. He recovered uneventfully. As he was the only child, it must have taken courage, in view of their sad experience, to decide to operate, but like many another layman, the parents were convinced that the tonsils and adenoids were responsible for the child's condition.

One case of oozing was overlooked until considerable blood was lost. It was stopped by placing a compress powdered with alum into the recess and suturing the pillars together over it. The other was stopped by the compress only held in position a few minutes.

One case of secondary hemorrhage occurred on the fifth day and was of slight degree and lasted but a few minutes after compression was applied. The other case bled some on the fifth day and considerably on the sixth, but was also controlled by compression.

The cases of chloroform narcosis were alarming. Since the last case, I have given ether only and tried to have

that given by a specialist although the physicians who anaesthized the troublesome cases were competent and experienced.

I have reported a few of the difficulties and reverses in an experience of eight years covering 450 cases. I should enjoy reporting the favorable results, but you are all familiar with them. Even the laity appreciate tonsillectomies. I have frequently had mothers say, "You operated on so and so and she is so much improved, that I came to see if my daughter needs operating." I have operated on a whole family of three boys at intervals. The parents opposed the first operation on general principles; they consented readily to the second and voluntarily requested the third

A twin boy four years of age, was operated for head colds, tonsilitis and earache. A year later the mother called and said she wanted the other twin operated because since the operation that child who had before been the feebler of the two was now the stronger; where on the other hand, the one not operated was falling behind and would have to be operated to keep even.

SUMMARY.

Tonsils should be enucleated to remove, prevent or cure the following:

- 1. Mechanical obstruction owing to undue over-size.
 - 2. Repeated acute tonsilitis.
 - 3. Quinsy.
 - 4. Chronic tonsilitis.
- 5. When their presence would likely aggravate diphtheria, scarler fever and kindred diseases.
 - 6. Progressive mal-nutrition
 - 7. Cervical adenitis.

The welfare of the ear frequently calls for removal of the tonsils.

Physiology not known—removal has done no harm. Removal of diseased tonsils always beneficial. Pathological tonsils cannot perform normal functions and should be removed as certainly and completely as if they were malignant.

OBSERVATIONS UPON CERTAIN PROTOZOAL INFECTIONS OF THE DIGESTIVE SYSTEM.

Elliott C. Prentiss, M. S., M. D. El Paso, Texas.

Read before the First Annual meeting of the Medical and Surgical Association of the Southwest, El Paso, Texas, Dec. 10th, 11th and 12th, 1914.

The subject of protozoal infections is becoming increasingly more important in this country on account of the fact that these conditions are more frequently recognized than formerly, and advances in diagnosing and treating them are constantly being made. Upon being searched for, protozoa are now being found in many cases where their presence was heretofore unsuspected. These infections are extremely common in the tropics, but are by no means confined to that part of the world Many writers report the finding of protozoa in the faeces in cases in which they believe them to be incidental to the other conditions. Whether or not they are only incidental in many of these cases is, in my opinion, doubtful.

There have been several valuable articles written lately on the subject of the relation of amoebae to pyorrhoea alveolaris or Rigg's disease. This is a very important subject, as we all know the obstinancy of these cases, and its frequent coexistence with chronic digestive disturbances. In my opinion it may either predispose to, or result from, digestive diseases, and in either case is worthy of the most careful attention, as the constant swallowing of pus from a discharging alveolar abscess should tend strongly to the aggravation of an existing digestive trouble. If the disease be really due to the amoebae found in these cases it suggests, by analogy, that emetine may be a very valuable drug to use in its treatment. This has been done, both locally in 1/2% solution, and hypodermically one grain daily, as in amoebic dysentery, with seemingly good results.

The finding of these amoebae is easy if proper care in the examination be observed. It is done in this way: Withdraw some discharge from the pus pocket by means of a sterile platinum loop and stir it into a drop of normal saline solution on a warm slide, cover with a warm cover glass, and examine immediately with a previously warmed microscope. The amoebae are numerous, show their characteristic movement, and vary in size from a leucocyte to several times that. The large ones are clear, only slightly granular, more actively motile than the smaller ones, and are probably of a different species. These amoebae may be stained with carbol-fuchsine and methylene blue and show up fairly well, but not as well as in the fresh specimen. As the result of emetine treatment alone these amoebae become less numerous, more granular and only very slightly motile.

I have found them in all cases of pyorrhea that have been examined for them, one patient having them also in the tonsillar crypts, and in the discharge adhering to a carious tooth. Dr. Henri Letord will report cases we have studied together in the discussion which is to follow. I believe that those amoebae are pathogenic in these cases, and that this discovery and the emetine treatment will put this disease on a very different basis from what it was formerly.

It may be, as numerous observers suggest, that there is a close interrelation between the following conditions: pyorrhoea, chronic tonsillitis, digestive diseases, rheumatism and nervous troubles. This is strongly suspected in three of the cases of Rigg's disease above mentioned.

Since coming to the Southwest I have seen the cercomona hominis in the faeces of a great many patients, but they were not generally in sufficient numbers to indicate a causal relationship. Last summer I had a number of cases of diarrhoea, most of them chronic, some acute, in which the cercomonas were present in large numbers in stools, without the amoeba histolytica being found. I was under the impression that they were caused by the cercomonas present, and upon looking up the literature found that similar cases had been reported by other observers. Some of these cases were very severe, two terminating fatally, and were suggestive of a severe catarrh rather than an ulceration. If they had been due to the amoeba histolytica with the cercomonas only incidental, I would no doubt have found the former at least once, in view of the severity of the symptoms,

as I examined fresh diarrhoeal stools passed in the office and those resulting from the administration of salts. In the fatal case seen with Dr. Craige the cercomonas were present in very large numbers, the amoeba histolytica was absent, and the post-mortem examination did not show any trace of ulceration in the intestines. There was no other cause of death to be found. Dr. Craige reported this case to the El Paso County Medical Society and it is recorded in the Bulletin for this month. I understand from Dr. Haffner that he also had a fatal case of this infection last summer.

The cercomona hominis is a flagellated protozoon, bluntly pointed at both extremeties, with a thin flagellum at one end, which by waving actively imparts motion to the organism similar to that of a tadpole. When once seen it cannot be mistaken at subsequent examinations. In fresh warm faeces the cercomona is very active, and one must wait for it to quiet down before it is possible to observe its characters.

Some of these cases were treated with hypodermics of emetine, twothirds to two grains daily. This was beneficial, but not nearly to the same extent that it would have been if the condition had been amoebic dysentery. By itself it was not curative, and in several patients the condition returned when the emetine was discontinued. The following procedures were used. but not all on the same patient: rest in bed, light or liquid diet; large doses of ipecac with laudenum at night followed by salts in the morning; castor oil at night with irrigations of ipecac, quinine or tannic acid in the day; and large repeated doses of bismuth subnitrate or subcarbonate. Castellani has

used with good results irrigations of a weak solution of methylene blue, and C. W. Stiles says, in a personal communication, that he has had success with flowers of sulphur.

In many cases it is exceedingly difficult to rid the patient of these little organisms, and there is a decided tendency to recurrence unless they are completely eliminated. I do not believe that this infection yields to treatment nearly as easily as does amoebic dysentery, if modern methods of treating the latter be used.

In now bringing up the subject of amoebic dysentery and amoebic abscess of the liver I wish to deal only with certain aspects of the life of the organism and the pathological condition present, and their bearing on the treatment and the failure to cure in some obstinate cases. The usual site of the intestinal lesion is in the colon, but may also be in the lower part of the small intestine; in fact, I believe that the ileum is much more frequently involved than is generally supposed. Adami mentions involvement of the small intestine, but Osler and R. P. Strong do not. I have seen a number of cases of amoebic dysentery in which there was tenderness in the middle of the abdomen as well as over the course of the colon. Acknowledging this, we have lesions both above and below the ileocaeca valve. The amoebae present in these two locations are on the surface of the bowel, where they can be reached by medication inserted into its lumen, and also in the tissues, where they are reached by the circulation.

Before the introduction of emetine the treatment of this form of dysentery was by means of drugs internally, usually ipecac, and local medication of

various kinds, either by rectal irrigations or by washing through a caecal or appendiceal fistula. The results were not satisfactory, as is proved by the high mortality and invalid rate. The toll that the United States has paid to this disease in the past fifteen years has been frightful. This treatment is not calculated to reach the amoebae in the tissues satisfactorily and is really a local one, and knowing the pathology, it seems to me remarkable that the results were as good as they have been. When ipecac is given by stomach some of the emetine is probably absorbed and has its effect, to an unknown extent. upon the amoebae in the tissues.

The emetine treatment, on the other hand, does reach the amoebae in the tistues, which accounts for the almost marvelous results seen in some cases. These satisfactory results, obtained so easily in a disease previously so justly dreaded, have led to overconfidence in the drug, and a losing sight of the pathology and other methods of treatment, with the result that many failures to cure are being reported. I do not believe that any amoeba histolytica can live where freely circulating blood containing emetine can get to it. It may be impossible to reach some amoebae in a given case on account of their being imbedded in scar or necrotic tissue, or tissues that are poorly supplied with blood. All other amoebae may be destroyed, but these few would in all probability lead to a recurrence.

I believe that large doses of ipecac given by mouth and retained, followed by salts in the morning, in conjunction with irrigations of quinine or ipecac, will rid of the amoebae the whole surface of the intestine that can be reached by these means, and the hypodermic injections of emetine will dispose of the remainder, with the possible exceptions above mentioned. The injection of emetine alone, to the exclusion of other means, as a routine treatment for amoebic dysentery is not sufficient; the day of the administration of ipecac by mouth has not passed.

Let us presume that we are dealing with a case of dysentery in which large doses of ipecac have been given and retained, quinine ememata have been carefully used, and there has been apparently a complete cure, until a recurrence has taken place several months later. We naturally would think that we had failed to get rid of all the encysted forms on the surface of the intestine or that some had remained alive in the tissues of the colon. The amoebae in these two locations may all have been killed and the recurrence be due to amoebae in the tissues of the small intestine above the ileo-caecal valve. which it was impossible to reach by irrigations.

In cases in which we fail to get a complete cure we should not be too hasty in thinking that we have not eliminated the amoebae. Marked symptoms may persist owing to scar tissue and contractures, catarrh, appendicitis, adhesions, or the persistance of nonamoebic ulcers which do not readly heal. A careful search should be made for the amoebae in these cases. Some observers report that a cure occasionally results when a long standing amoebic dysentery develops a bacillary dysentery. This is probably due to the intense congestion bringing freely circulating blood in contact with amoebae in sluggish lesions. It may be that Bass' ideas on the destructive properties of normal blood serum for the protozoa

of malaria can also apply here. This curative effect is probably not due to the production of an immunity against the amoeba resulting from the bacillary infection, but may possibly be due to the toxines thrown out by the bacillus being destructive to the amoeba.

Bass states that when a malarial patient receives insufficient treatment the usual asexual, non-resistant form of the parasite in the blood is converted into the sexual , resistant form, the organism acquiring a greater resistance to unfavorable conditions, or rather practically, though not actually, developing more or less immunity to quinine. That is evidently similar to what occurs in many cases of amoebic dysentery. When failure to cure occurs, frequently the only amoebae to be found are those in the encysted stage, and these are more resistant to further treatment than the others

Amoebic abscess of the liver is, as far as we know, always due to the presence of amoebae in the intestines. Some physicians in the tropics report it in as high as 25% of all cases that have come under their observation. In my experience it has not been anything like that frequent.

When the amoebae get to the liver they produce localized congestion, and in this stage may sometimes be cured by large doses of ipecac or, better emetine, the drug entering the circulation and evidently acting as a germicide.

When the abscess has formed the best thing to do, of course, is to open and drain it. Frequently after operation the abscess is allowed to drain until healed, and the patient then discharged without further treatment. An understanding of the pathology of the condition will suggest a better plan to fol-

low. The wall of the abscess may be thin or thick, and this is the site where the amoebae are attacking the liver substance. The amoebae are in large numbers in this lining wall and frequently when the abscess heals all the amoebae are not killed, which accounts for the occasional recurrence of the abscess. It seems to me reasonable that irrigation of the abscess cavity with an amoebicidal solution of quinine is indicated and should promote healing. solution only reaches the amoebae on the surface of the abscess wall and not those which are actually attacking the liver cells, that is, extending the inflammation. On this account I believe that emetine is indicated in all such cases unless there be some very good reason why it should not be given. Then it may be that some encysted amoebae, which are more resistant to treatment and healing processes than the unencysted form, lie dormant in an apparently healed lesion and cause a recurrence some time later. This could probably be prevented by the above treatment. Persistence of soreness at the site of operation and failure to gain satisfactorily in weight would lead us to suspect that all the amoebae had not been eliminated.

The following two cases seen last summer should be of interest here. The first is that a young white man, 22 years old. He lived in Mexico City from August, 1909, to January, 1910, and since then has spent his time between here and Mogollon, N. M. No history of diarrhoea. His present illness dated from October, 1913. A gradual aggravation occurred with marked enlargement of the liver and in the first part of May Dr. B. F. Stevens opened the abscess, which contained

about a liter and a half of pus. Drainage was free and the wound closed on July 10. Then fever began again, varying from 100° to 102.5°, there was pain the region of the liver, occasionally considerable, and the liver enlarged. I saw him again in consultation with Dr. Stevens, and the use of emetine following the operation was suggested. This was done with the result that in 48 hours after the first injection the discharge had practically ceased. Recovery was then uninterrupted.

The second case was that of a young man, 26 years old, seen with Dr. James Vance, He had had a dysentery of varying intensity for seven years. The faeces had evidently never been examined for amoebae. A liver abscess developed, duration 4 months, which Dr. Vance opened and drained. The next day, 1-3 grain of emetine was given hypodermically, and thereafter the same amount three times daily. In 48 hours after the first injection the discharge had practically ceased. He was put on careful treatment for the intestinal infection, which yielded satisfactorily. Soreness in the region of the liver persisted for some time, but finally disappeared. He did not gain satisfactorily in weight. There has been no recurrence.

If it be true that all cases of amoebic infection of the liver are secondary to an intestinal infection, why should patients who have recovered from an amoebic liver abscess be allowed to go on their way without making some attempt to cure the intestinal infection that caused it? I believe that amoebae should be sought in the faeces of these patients, and if found, they should re-

ceive careful treatment for such infection. I have made this suggestion in a previous paper and respectfully repeat it now.

REFERENCES.

- 1. Barrett; M. T., The Protozoa of the Mouth in Relation to Pyorrhoea Alveolaris. Dental Cosmos, August, 1914, Vol. LVI., No. 8.
- 2. Chiavaro, Angelo. Researches upon the Endamoeba Bucallis. Reviewed in the Dental Cosmos, September, 1914. Vol. LVI., No. 9.
- 3. C. C. Bass and F. M. Johns. The Specific Cause and the Prompt Specific Cure of Pyorrhoea Alveolaris or Rigg's Disease. New Orleans Medical and Surgical Journal, Nov., 1914. Vol. 67, No. 5. (Valuable discussion at end of article).
- 4. Smith, A. J., Middleton, Wm. S., and Barrett, M. T., The Tonsils as a Habitat of Oral Endamoebas. Journal A. M. A., Nov. 14, 1914. Vol. LXIII, No. 20.
- 5. Prentiss, E. C. Infection with the Cercomona Hominis. New Mexico Medical Journal, December, 1914. Vol. XIII., No. 3. (List of references appended to article).
 - 6. Adami. Principles of Pathology.
 - 7. Osler. Practice of Medicine.
- 8. R. P. Strong in Osler and Mc-Crae, Modern Medicine.
- 9. Bass, C. C. Treatment and Cure of Malaria. Southern Medical Journal. May, 1914. Vol. VII, No. 5.
- 10. Prentiss, E. C., Observations on Amoebic Dysentery, New Mexico Medical Journal, August, 1913. Vol X., No. 5.

MANY YEARS PROFESSIONAL EXPERIENCE IN THE AZTEC LAND—THE MEXICAN REPUBLIC.

G. F. Brooks, M. D. Las Cruces, N. M.

Former Chief Surgeon Mazapil Copper Co., Ltd., Concepcion del Oro-Mexico.

When the Aztec retinue of Montezuma's court moved majestically, amid feathers and plumes from the Hill of Chapultepec adown through the valley of what is now known as the City of Mexico, crossed the giant causeways of Tenochtitlan—on through mighty forests, bearing the Chief's daughter, a thin delicate maiden, to the warm springs of which some hunter had told marvelous tales, it was little dreamed how far reaching the results would become.

Could it have been known that the miraculous healing of the Emperor's daughter would make the springs famous it would have awakened the imagination of the practical "Medicine Man," as well as the poet. The former would have sprung to his vantage-ground many years earlier than he did, and have reaped rich harvests.

The dark-visaged maiden returned to Anahuac, well, strong and vigorous, and Topo-Chico Hotsprings' first distinguished visitor was chronicled and the fame of the healing waters went abroad in the land of the Montezumas, until centuries later, it attracted invalids from the United States of the North, and from across the seas.

Surely Ponce de Leon, in his search for the Fountain of Youth, and the Elixir of Life. had failed to visit these springs, whose healing virtues were afterward hailed with delight by the Spaniards as "Alivio del Mundo."

And so it came about in the course of time, that the medicinal properties of the springs at Topo-Chico, Mexico, began to be compared with the Hotsprings Arkansas.

Thus it was that late one afternoon in the year 1889, I left the latter place and journeyed westward for three days arriving at Topo-Chico Hotsprings, three miles from Monterey, Mexico, one hundred and sixty miles from the Rio Grande, at Laredo, Texas.

The splendid capital city, Monterey, of today, bears but faint resemblance to the quaint old town of a quarter of a century ago, but the springs at Topo-Chico remain forever the same.

Immediately upon my arrival in Monterey at midnight, I went to my post of duty at the Hotsprings, having been engaged as locum tenens for a medico there, who desired to return to the United States.

In that strange land, and still stranger tongue, I assumed my professional duties the next morning, for the healing art, like the healing waters, is the same everywhere, and suffering humanity, whether stranger, or friend, appeals alike to the humane physician.

As many visitors at the Springs were Americans and English, I had no trouble with the language, and with the aid of an intelligent interpreter, the rest came easy.

I received unvarying courtesy and kindness from the medicos of Mexico, and it remained for a confrere, from my native land to exhibit a spirit of hostility.

On January first, 1890, while seated in the "Plaza Principal" in Monterey meditating of the year that had just been added to the "Mausoleum of Buried Ages," my thoughts reverted to my native land, my childhood home, and loved ones far away.

A strange feeling of loneliness came over me.

To many the past year had brought unalloyed happiness and joy, to others, only sorrow and disappointment, and to me, it had not been unkind. My reverie was abruptly disturbed by a voice in a familiar tongue, and instead the expected, cordial-fraternal greeting of a professional brother, who had preceded me many years to Mexico, I was awakened to the fact that I had seriously violated the law, in failing to report some cases of smallpox, then under my supervision, and further, I was advised that only hasty flight to the American side of the Rio Grande would save me

I replied that while his generous offer to take over my entire clientele was unprecedented, I gravely questioned his motives, and positively declined to be summarily disposed of in such a manner.

On interviewing a prominent Mexican medico, a nephew of the late Gen'l. Geronimo Trevino, he graciously informed me that no law existed in Mexico, requiring any report of contagious diseases.

That one of my countrymen should attempt to eliminate me as a competitor, by such dishonest means, was inconceivable.

Oh! Brother Physicians, the world is wide, humanity's need is deep, and the desire to relieve that need should be so sacred that across any gulf we could clasp hands, and go on together.

Soon after this incident occurred, I was appointed Superintendent of the Mexican National Railway hospital at Monterey, the first one on the Northern division, and I was called on later, to treat smallpox, as an epidemic was to be dealt with, I began to vaccinate those not afflicted, thus readily controlling the malady.

Some time after this, we had two epidemics of yellow fever, the port of Tampico on the Mexican Gulf being responsible for the infection, and the mortality was 35 per cent, and included the wealthy and cultured people of the city.

The governor, General Bernardo Reyes, who was a victim of the "Decena tragica," in Mexico, was aroused to the situation, and municipal sanitation, personal and domiciliary cleanliness, were the order of the day, the mandate going forth "Clean out, clean up, and keep clean" with rigid quarantine regulations against Tampico.

Mexico, the land of sunshine and flowers, the home of hospitality and song, is an empire with the greatest resources, with her unexplored and inexhaustible mines, her primeval forests, in fact, the story of her wealth has never been told.

Her riches have been her glory, and her misfortune.

When her internal strifes are ended, and Mexico takes her place among the nations of peace which unhappily are few today, she will be found to rise with new splendor and glory, from her

baptism of blood, and could the shades of the Aztecs return, they would be lost in their own land, where once they roamed free in its primeval forests, whose mahogany and ebony trees now furnish roads for the steam god that moves resistlessly throughout the ancient home of the Montezumas.

After a number of years residence in Mexico, I became Chief Surgeon of the Mazapil Copper Co., Ltd., one of the largest English companies operating in Mexico, and removed from Monterey to Concepcion del Oro, State of Zacatecas. There I came into most direct touch with the Mexicans. and found them patient, loyal, and with an almost idolatrous faith in medicine.

Under serious accidents, their calmness suggested the statues of the Aztec gods.

At the end of my five years contract with this company, I renounced my position and decided to locate where the altitude was lower, and wended my way to the semi-tropics among the orange groves of Montemorelos, a short distance south from Monterey.

There I planted an orange and pecan grove, and there I would still be, but for the continuous revolutions.

Some day, let us hope that it is not far distant, the banner of freedom will wave over that republic, which holds within itself the greatest wealth and opportunities of any land under the sun.

A land that is teeming with unexplored depth of riches, and fair prospects for those who have the brotherly kindness to cooperate with their fellow man, for those who have the inspiration to know that "Progress is the law of God."

AID FOR BELGIAN PHYSICIANS

The efforts of the Committee of American Physicians for the Aid of the Belgian Profession are directed toward the relief of civilian physicians and their families in the northeastern or invaded portion of Belgium.

The purpose of Madam DePage is to establish additional field hospitals and further other Red Cross work in the southwestern part of Belgium.

In a recent letter she says: "The big conflict of the present war is still in the future! the most terrific fighting of all will come this spring. We must foresee the coming slaughter and be prepared to render instant aid to the thousands of wounded, friends and foes, who will fall within our lines."

Madam DePage has visited New York, Philadelphia, Baltimore, Washington, Pittsburgh, and Chicago, and expects to stop at the following cities on her way to or from the Pacific Coast, St. Louis, Kansas City, Los Angeles, San Francisco, Omaha, Denver, Colorado Springs, St. Paul, Minneapolis, Chicago, Buffalo and Boston.

The following is an extract from a letter from Dr. J. Riddle Goffe under date of January 26th, 1915:

"The fact that the English Government has announced that it will no longer continue to grant its monthly stipend to the British Commission for Relief in Belgium comes with somewhat startling disappointment.

"The work of relief must now depend almost exclusively upon contributions from the United States. This means that our efforts must be redoubled if we are eventually to reap the benefit of what has already been done and carry the Belgian people through to the time when their own meager harvest can supply their actual necessities. It must be constantly kept in mind that the status of the 1,400,000 utterly destitute in Belgium are still standing in the bread line or hovering around the soup kitchens. A recent communication from Dr. Jacobs of Brussels. gives a heartrending picture of the condition of Belgian civilian physicians and their families."

Report of the Treasurer of the Committee of American Physicians for the Aid of the Belgian Profession, for the week ending February 20th, 1915:

Controbutions.

Controbutions.
Dr. Sylvester McNamara, Brooklyn \$ 5.00
Dr. J. Watanabe, Seattle, Wash 5.00
Anonymous—B, Pittsburgh, Pa 30.00
The Erie County Medical Soc., Erie,
Pa 25.00
Dr. Hugh Cabot, Boston, Mass 25.00
Dr. E. Evans, La Crosse, Wis 10.00
Dr. W. J. Herrington, Bad Axe, Mich 10.00
Otero Co. Medical Society, La Junta,
Colo 25.00
Vermilion Co. Medical Soc., Danville,
III 25.00
Dr. Eva Charlotte Reid, San Fran-
cisco, Cal 5.00
Dr. Howard Carter, Webster Groves,
Mo 5.00
Dr. G. H. Torney, Brookline, Mass 5.00
Dr. John B. Murphy, Chicago, Ill 100.00
Dr. D. E. McGillivray, Port Angeles,
Wash 5.00
Dr. Charles N. Spratt, Minneapolis,
Minn 100.00
Dr. J. M. Thorne, Pittsburgh, Pa 5.00
Westerly Physician's Assoc., Wes-
terly, R. I 10.00
Dr. J. P. Long, Chicago, Ill., 1.00
Dr. Roy Sexton, Streator, Ill 5.00
Dr. D. E. Cornwall, St. Maries, Ida. 5.00
Aesculapian Club of Buffalo, Buffalo,
N. Y
Pocatello Medical Society, Pocatello,
Idaho 10.00
Dr. A. R. Thomas, West Eaton, N. Y. 5.00
Receipts for week ending Feb. 20\$ 446.00
Previously reported receipts 3,133.00
Previously reported receipts 3,133.00
Treviously reported receipts 9,200.00
Total receipts\$3,579.00
Disbursments.
Previously reported disbursements \$3,135.00
Disbursements week ending Feb. 20 440.00
Disputsements week ending reb. 20 410.00
Total disbursements\$3,575.00
Recapitulation.
Total receipts\$3,579.00
Total disbursements
Total dispursements 3,373.00
Balance \$ 4.00
F. F. SIMPSON, M. D. Treasurer.
F. F. SIMPSON, M. D. Treasurer.

Abstracts

HEART DISEASE.

The importance of remembering that we are dealing with an organism and not with a mechanism in our studies of disease is pointed out by J. I. France, Baltimore (Journal A. M. A., Feb. 20, 1915), and especially the necessity of appreciating that pathologic processes may show their first effects in the nervous system. He gives the result of a study of the nervous and mental symptoms of cardiac disease, and presents his tentative conclusions. Head has shown that there are two symptoms referable to the nervous system that are quite constant in cases of disturbed or broken cardiac compensation. First, a reflected pain, along the distribution of the fifth nerve and, secand, depression, anxiety and fear, independent of worry about the disease, and with or without distinct delusions and halluciations. His conclusions, so far as he has been able to give them from Head's observations anu his own are briefly summed up as follows: 1. Defective heart valve causing cardiac strain or irregularity is sufficient to cause a distinct emotional depression and fear, which may be unexplained or be attended by distinct delusions or hallucinations. 2. The mental symptoms of cardiac disease are apt to occur when the inhibitions of the higher centers are relaxing in the hypnagogic or incipient dreaming state, and there is much to support the old view that night terrors or nightmares are often due to disturbed heart action. All heart patients should be questioned closely about their sleeping and dreaming. 3. There are cases of heart disorder that may be overlooked by the physician by his not studying the nervous system, and the stethoscope may not reveal them. Nocturnal attacks of bradycardia may be the only cardiac symptom for a time, and the importance of studying the heart action during sleep is evident. 4. The nervous symptoms of certain forms of heart disease are sufficiently constant to be or some practical value. The neuralgia of the fifth nerve and the scalp tenderness over its distribution are so frequent as to be of diagnostic and prognostic value. In chronic

valvular cases it may be so constant that the patient himself learns that it indicates a need of rest. 5. It is important to remember that in many cases of fifth nerve neuralgia and also many cases of neurasthenia with anxiety, fear and depression, especially in patients over forty or fifty years of age, may possibly be due to that condition of nerve strain which may be caused by nascent cardiac disorder not yet shown by physical signs. We are just beginning to learn the importance of cardiac nerve and muscle strain in the production of nervous Every physician should make symptoms. these a study, and take note of the nervous and mental symptoms of his patients; and every general hospital should have a psychologic laboratory for the investigation of suitable cases.

TORTICOLLIS.

A critical analysis of one hundred cases of torticollis from the records of the Boston Children's Hospital and compared with the findings in the literature is given by H. J. Fitz Simmons, Boston (Journal A. MI A., Feb. 29, 1915). Any deforming relation of the head and neck, and chiefly involving the sternocleidomastoid is recognized as under this head. The pathologic work on this condition has not, he says, been extensive. Its etiology is varied. It is secondary to some injury or disease of the neck structures, such as sear contraction, trauma, and unilateral displacement of the vertebrae, which he thinks is more common than is generally supposed. The theory that so-called congenital torticollis is due to constrained position in the uterus he says needs only to be mentioned as a theory. Figures are given showing the frequency of the disease, which is apparently very great. Congenital torticollis may be seen at birth, or appear a few months later, and frequently coexists with other malformations. In this analysis a history of forceps delivery is given in a number of cases, but it is by no means universal. There is little evidence pointing to heredity of the condition. In this one hundred cases, only one parent suffered from it. The average duration before discovery was twenty months, and in two cases extended to four years. There were two cases in which caries was suspected for a time, and in four cases a rachitic deformity simulated the congenital type. The treatment of congenital torticollis may be by manipulation, use of mechanical appliances, and operation. Manipulation usually is sucessful in infants when the deformity is slight. Mechanical treatment should be simple enough to permit the removal of the appliance for daily manipulation. The operative methods should embody the complete severance of all tendons and facial bands preventing the correction of the deformity. The open operation on the muscle is the rational method and the three sides for interference are, first, just below its mastoid insertion, second, at its origin, and third, in the middle position. There are many dangers to the latter from important vessels and the operation is difficult. The resulting scar is visible. The mastoid operation is easily performed, and the hair can cover any scar; but the lower operation has been most favored in this country. The operation used at the Children's Hospital nas been mostly by the sterno-clavicular incision and the routine is described. Overcorrection for a certain length of time is generally recognized as necessary. The question of the special susceptibility to torticollis is taken up, and the conditions existing before admission are given in tabulated form, as well as the cause of the deformity according to the parents' views and their testimonials. routine is described. Overcorrection for a pensatory scoliosis seems to depend on the condition. Operation definitely offers a cure in congenital torticollis, and the results are uniformly satisfactory.

HAY FEVER.

As a preliminary sketch of the vegetable pollen theory of hay fever, E. T. Manning, Omaha (Journal A. M. A., Feb. 20. 1915). gives the results of experiments with ragweed pollen in the production and treatment of autumnal hay fever. The definition of hay fever, in accordance with our present understanding, would be, he says, an exudative catarrh of the conjunctival nasal and tracheabronichial mucosa caused in hypersensitive individuals by the sensitizing anaphylatoxic action of the pollen of certain plants. The best explanation of the action of pollen in hay fever, he says, is that given

by Koessler, who attributes the disorder to conditions of the mucosa which interfere with its normal digestive function of the foreign protein, which enters into the system and sentitizes the local tissue. The question of how we shall treat the disease in view of this theory is taken up. Manning says two ways are open: We may try to combat the disease by adding some substance to the organism that will neutralize the poisonous fraction of the slight protein molecule, this constituting passive immunization, or one may try to develop in the tissue of the individual a substance which will neutralize the poisonous fraction, thus producing active immunization. Dunbar has had some success with the former method in one form especially, in the spring type of hay fever. Koessler has used active immunization, employing ragweed pollen and treating the autumnal variety. He gave injections both in a prophylactic way before the appearance of symptoms and after the disease had been established, and reports 10 per cent. of absolute cures, 70 per cent. markedly improved, 12 per cent. subjectively improved, and only 8 per cent. unaffected. Manning reports his own experiments with the method following a slightly modified Koessler technic. "Ten mg. of pollen from each variety is triturated with sterile silicon in an agate mortar. Twenty c. c. of sterile solution ten times stronger than a physiologic is then gradually added and thoroughly shaken. The suspension is placed in the incubator for twenty-four hours and again shaken. The mixture is then centrifuged at a high rate of speed and the supernatant fluid pipetted off. This solution is a dilution of 1:1,000 and from it, all others are prepared. First it is diluted ten times with sterile distilled water to which has been added 0.25 per cent, phenol (carbolic acid). This dilution and all lower ones are unstable and deteriorate by progressive proteolysis into a toxic product within ten days. The concentrated 1:1,000 solution is more stable, and will keep on ice for about three weeks. It is needless to say that all manipulations must be carried on with aseptic precautions. I have made it a rule never to inject a solution until after plating on agar." The unit of pollen toxin employed was the amount of protein contained in

1-100,000 gm. of pollen. Twenty-one cases were treated. Fourteen were objectively and subjectively relieved. In the other seven, the treatment was for one reason or another incomplete. But four of the patients are certain that the attacks were lighter. Three of the patients had a bad complicating asthma. In two of these it was under control, and the other was much relieved. One case was made worse, probably by too large a dose, and Manning believes that a dose larger than 75 units of ragweed pollen protein cannot be given without causing unpleasant symptoms. He was impressed with the fact that the immunity conferred was of brief duration. It is difficult to say what constitutes a cure, especially in this disorder, and he has tried to be conservative in his interpretations of his results. But the very distinct impression remains that the injections have been of decided value in ameliorating the distressing symptoms.

NEW AND NONOFFICIAL REMEDIES.

Since the publication of New and Nonofficial Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies."

Alcresta Ipecac Tablets.—Tablets containing an adsorption product of ipecac alkaloids and Fullers' earth, each tablet representing 10 grs. of ipecac. The ipecac adsorption product is said to pass the stomach unchanged but to be decomposed in the intestine with liberation of the ipecac alkaloids and thus to exert the amebacidal Co., Indianapolis, Ind. (Jour. A. M. A., Feb. 13, 1915, p. 591).

Typhoid Combined Vaccine (Prophylactic).—Marketed in vials and syringes, each action of ipecac in the body. Ely Lilly and package containing three doses. Schieffelin and Co., New York (Jour. A. M. A., Feb. 20, 1915, p. 665).

Cantharidin, Merck.—A non-proprietary preparation of cantharidin. Merck and Co., New York (Jour. A. M. A., Feb. 20, 1915, p. 665).

PROPAGANDA FOR REFORM.

Celerina, Aletris Cordial and Kennedy's Pinus, Canadensis, Light and Dark.—As glaring instances of nostrums exploited to physicians on unscientific claims and false representations, the Council on Fharmacy and Chemistry has prepared reports on the products of the Rio Chemical Co., namely, Celerina, Aletris Cordial, Kennedy's Pinus Canadensis, Light or Abican and Kennedy's Pinus Canadensis, Dark or Darpin.

In addition to 42 per cent. of alcohol Celerina is stated to contain kola, viburnum, celery, cypripedium, xanthoxylum and aromatics. There is no ingredient in Celerina, except the alcohol, that has any recognizable activity and the alcohol content is nearly as great as that of whiskey. The sooner it is realized that this preparation is essentially nothing but alcohol and bitters exploited under a fancy name, the better for the science of medicine and the public health.

In addition to 28 per cent, of alcohol. Aletris Cordial is stated to contain aletris, helonias and scrophularia. These drugs have been discarded as valueless by modern scientific medicine. In Aletris Cordial there is no ingredient capable of producing any other effect than the alcohol stimulation and such psychic effect as may be due to the bitter taste. Yet physicians are asked to believe that "Probably no remedy is so uniformly successful in the prevention threatened miscarriage as ALETRIS CORDIAL, Rio." Alcohol being the essential constituent of Aletris Cordial and the amount being high enough to promote the formation of the alcohol habit, the recommendation to administer it during pregnancy and to young girls is dangerous and an outrage.

Kennedy's Pinus Canadensis, Dark, recently renamed "Darpin" and Kennedy's Pinus Canadensis, Light, recently renamed "Abican" are of interest chiefly because of the unwarranted claims which are made for them. The 'dark" preparation appears to be some sort of a tannin-bearing extract. The "light" preparation appears to be a sulphate of zinc-alum injection. It is devoid of tannin and is not an extract of pinus canandensis as claimed. A discussion of the claims made for these preparations is

superfluous. It is enough to mention that they are recommended in such diseases as albuminuria fetid perspiration, gonorrhea, uterine hemorrhage and leucorrhea. (Jour. A. M. A., Feb. 13, 1915, p. 606).

Tri-Iodides, Three Chlorides and Maizo-Lithium.—As an illustration of unreliability of claims and unscientific character of proprietary mixtures the Council on Pharmacy and Chemistry published reports on Tri-Iodides, Three Chlorides and Maizo-Lithium, products of the Henry Pharmacal Company (J. F. Ballard, proprietor).

The A. M. A. Chemical Laboratory reported to the Council that contradictory and false claims were made in regard to the composition of Tri-Iodides (Henry). The Council held that Tri-Iodides conflicted with its rules in that the composition was incorrectly stated, because it was advertised indirectly to the public, because unwarranted therapeutic claims were made for it, because the name did not indicate the potent ingredients and because the mixture was unscientific.

Three Chlorides was claimed to contain mercuric chloride, arsenic chloride and ferrous chloride (protochloride of iron). The A. M. A. Chemical Laboratory reported to the Council that, while the advertising matter laid much stress on the superiority of the protochloride of iron which was stated to be present, the iron was not in the ferrous but in the ferric condition. The Council held Three Chlorides in conflict with its rules in that its composition was not correctly stated, in that it was advertised aindirectly to the public for the treatment of disease with the likelihood of doing harm, in that exaggerated and unwarranted therapeutic claims were made for the preparation in that the name of this mixture did not indicate the presence of its potent constituents: iron, mercury and arsenic, and in that the routine administration of mercury and arsenic with iron in fixed combination is irrational.

Maizo-Lithium is one of the many proprietary lithium preparations based on the disproved theory that lithium dissolves uric acid deposits in the body. While claimed to contain "maisenate of lithium" the Association's chemists reported to the Council that they questioned the existence of such a

compound, that the manufacturer had failed to submit evidence of its presence in his preparation and that chemical analysis indicated the presence of lithium citrate, instead. The Council held Maizo-Lithium in conflict with its rules in that its composition was not disclosed, in that it was advertised indirectly to the public and in that unwarranted therapeutic claims were made for it (Jour. A. M. A., Feb. 5, 1915, p. 528).

Purity of Ether and Postanesthetic Glycosuria.—Animal experiments by Ross and Hawk show that postanesthetic glycosuria is not due to impurities as has been claimed, but is brought about by a carbohydrate free diet prior to the anesthesia. Those who claim that the U. S. P. tests for the purity of ether are insufficient, should present better evidence than they have so far done. (Jour. A. M. A., Feb. 20, 1915, p. 668).

Cod Liver Oil versus Milk, Butter and Eggs.—Like other fats, cod liver oil is readily digested and utilized in the body. Its disagreeable taste has largely outweighed its availability as a nutrient. Recent experiments have established that the peculiar growth promoting qualities of cod liver oil are likewise possessed by butter and eggyolk fat. There seems to be no reason, therefore, to administer the unpalatable cod liver oil (Jour. A. M. A., Feb. 20, 1915, p. 667).

Cod Liver Oil Cordials.-To determine if the growth promoting principle of cod liver oil is contained in the oilless cod liver oil preparations on the market, feeding experiments have been made with some of these preparations by J. P. Street of the Connecticut Experiment Station. In these experiments it was found that the normal nutrition and growth of rats was not maintained when the fat of a standard ration was replaced by a representative amount of Hagee's Cordial of the Extract of Col Liver Oil Compound, Vinal, Wampole's Perfected and Tasteless Preparation of an Extract of Cod Liver and Waterbury's Compound, Plain. When, then, these animals were placed on a ration containing an equivalent amount of cod liver oil, normal nutrition and growth was soon established (Jour. A. M. A., Feb. 20, 1915, p. 638).

Town's Epilepsy Treatment.—This is a

bromid mixture marketed by the Towns' Remedy Company, Milwaukee, Wis. It was found by the A. M. A. Chemical Laboratory to contain the equivalent of 21.3 grs. of potassium bromid and 0.78 gr. of potassium iodid per dose (one and one-half teaspoonful) (Jour. A. M. A., Feb. 20, 1915, p. 683).

Virol.—The Council on Pharmacy and Chemistry voted to refuse recognition to Virol (sold by the Etna Chemical Co. in the United States) because the claims made for it were unsubstantiated and unwarranted. A referee who analyzed Virol concluded that it was an extract of malt, with fat and a small amount of protein. He held that Virol could not be considered a "complete food" as claimed, nor an ideal food for infants (Jour. A. M. A., Feb. 20, 1915, p. 683).

Salesthyl and Sal-Hyl.—Salesthyl, a liquid marketed in capsules, is stated to be the menthyl ester of methyl salicylate. Sal-Hyl is stated to be an ointment of Salesthyl, but the exact composition is not disclosed. Salesthyl was submitted to the Council on Pharmacy and Chemistry with the claim that it had the properties of salicylates but to be more efficient. The evidence to substantiate the therapeutic claims was found to be inconclusive and untrustworthy. Being similar to "sal-ethyl," described in N. N. R., the name salesthyl was held objectional. The Council refused recognition to these preparations (Jour. A. M. A., Feb. 20, 1915, p. 684).

Analutos.—Analutos is a name applied to calcium acetyl-salicylate. The Council on Pharmacy and Chemistry refused recognition to Analutos because it was held not to have any advantages over acetylsalicylic acid. In view of this, it was held that medicine should not be burdened with this non-descriptive name (Jour. A. M. A., Feb. 20, 1915, p. 684).

Citarin.—Citarin was admitted to New and Nonofficial Remedies in 1906. The Council on Pharmacy and Chemistry held that experience had failed to demonstrate the value of Citarin as a uric acid solvent and hence directed the omission of it from New and Nonofficial Remedies (Jour. A. M. A., Feb. 20, 1915, p. 685).

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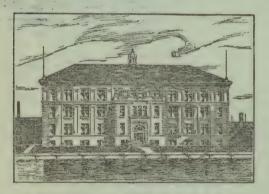




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Mew Mexico Medical Zournal

June 1914

JUN-25 1914
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VOLUME XII.

NUMBER 3

PANOPEPTON-

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Thus, without taxing energy for digestion, Panopepton contributes to the means by which both digestion and energy are recruited. And it leaves no indigestible, inassimilable, malefic residue.

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ations Sputum, examination for tubercle bacilli Throat cultures, examination for	5.00 2.50	MICROSCOPIC examination of pus, ascitic, pleural, and spinal fluids, each
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The above plus white cell "differential" count	2.50 2.50 2.50	MILK Mother's milk complete 5.00 Fat test on same 1.00
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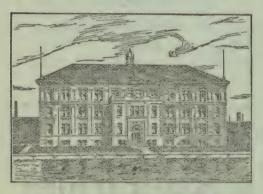
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Annual meeting, Albuquerque, October 5, 6 and 7, 1914

Mew Mexico Medical Fournal



VOLUME XII.

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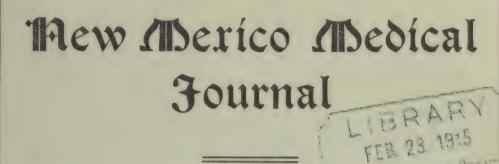
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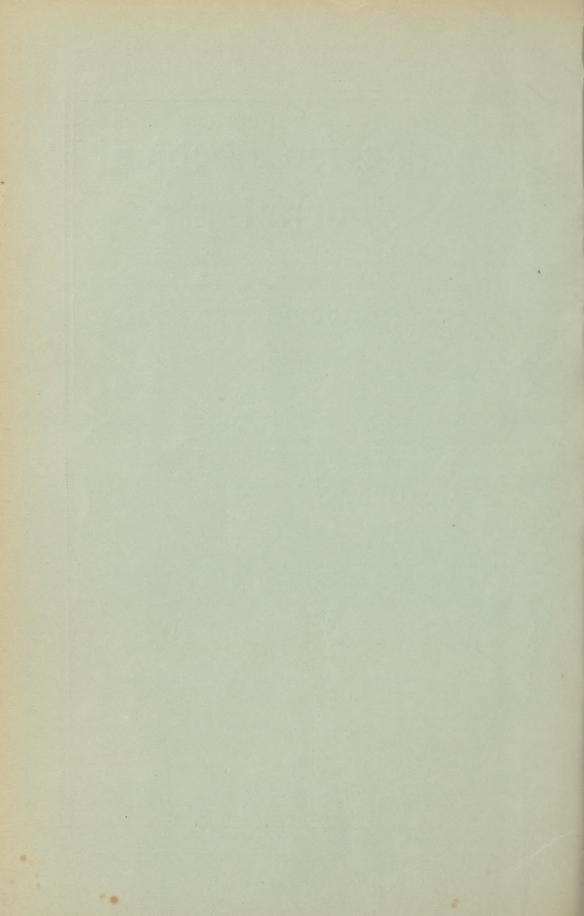
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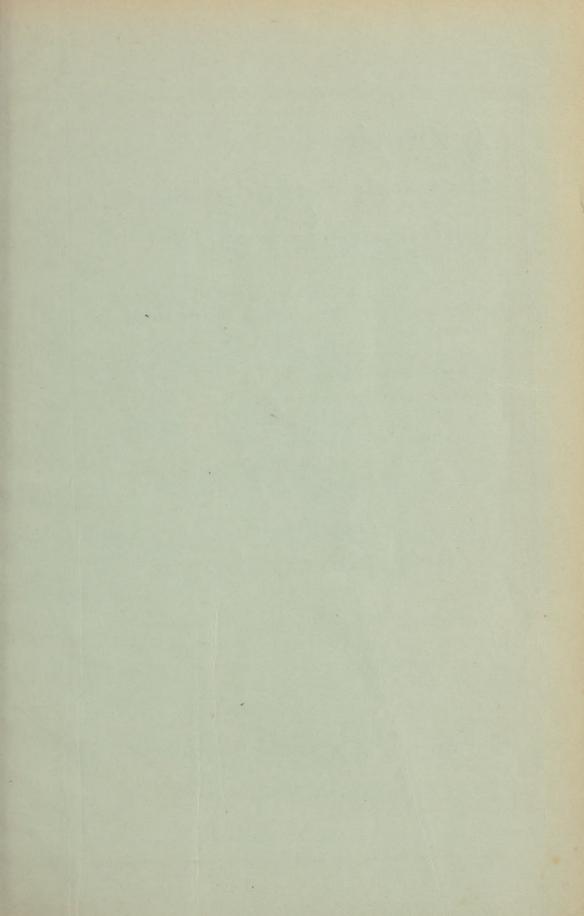
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